<213> Homo sapiens

<400> 622

gtctttgaaa ccttttttcta atncttgctt tctaatnctt ggcnactcnn ctctcnctgc 60
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agtcagaatt tatagctttc actatgtcca agactaggac tgggttataa agattttctt 180
ttgtgaagga aaataaaaga aaatttgcca ctactgcatt tactttacta ttgtaaactt 240
aagattcatt ccttagtctt tggaattttg atgtctcaaa accagatgag tggaagtgct 300
gaatttgcaa aataaagcta agaatgctta actctgcact ttaagttcta ctctgaccaa 360
attgaagatg agcagagcag ccctgaacag catttngttt atacagtctt gtttaagaat 420
agaatttttt taactcttca tttnttgtct ctgtggaagc tgtgtaactc tttttaaaat 480
gcaatttaaa acattntggt attctaacaa ttctctcaan aaacagcatt tccaatggna 540
atnggtattg ntacgctgta ccttatgtat tnnctgtacc tgaacacttg atgctgcctn 600
acangaaaat agaactttat gttaaaaaat aaaagtctgg tncttctttg naaaaacaac 660
nncnctnctn ctcnaaatcc ncnacannnc tnnnaatntn ctaanntnag tctnnnttnn 720
ngcanncttn tnnncccnct nanctccctn tntcntnttc atatctanan tnacancccc 780
ccct 784

<210> 623
<211> 1164
<212> DNA
<213> Homo sapiens

<400> 623

gggacttntt angccntttt cgaaatccnt tncttccnaa tcccttngca actntcnnct 60
ntctgcanga tcccatcgat tcgaattcgg cacgnagnga gcnnattcnc gttttnagng 120
ttctntttct ntnatnnaca ngngaaantt ccaggnnatc ntgnnnccnt atctgantna 180
ngctngnttn aacntngnna caccnngnct nnnaancaaa tttnanaaaa gggnancncn 240
nanancatnn nanntnncca atctaccaaa atcanaacac ncantgaaca acacananna 300
tnnnatacnn tctacnccaa ancnncncat nncacgcacg ataanacanc nnnnaaaaan 360
ancnaancan atatcanann caaccntana cnannaatca nacnctnanc tcccncacag 420
canngngacn aanaacnanc antgataaan cncacctnnn tannacacac ctnannancc 480
nntntantcc cgaataacca atngccacnn ctannccnat aacanantcn ctnancctc 540
ntgcatcaaa ttantaaatt cncnancata aagnanatca cagcctcntt cnaccnntga 600
tcnaanctnt anaccnangn nanncnntat naaacnctat ancantnnna ctnnaacntt 660
nnatcngcnc ntanaaatta aanatcnaan actcaatatn ncggaatant nncntctcta 720
nataannnta naacggngna aanacnctc anacataann gncntacnna tcgatctatc 780
anntnancat aaagtcaccc gcatattnac cnacgnncaa cataannnaa atnctactct 840
cagaccatat aaatntcgcn tccntanatc agngcnanan tacaaanacg tcgcnnnngt 900
ntggaccaca cgncntagat aaacacnnat aaacanttt tanatgtaac acatttcnna 960
tctatnaaat ancatcattn atgnanacga tnacaacaaa nnctacncna tgntactaaa 1020
nacaantaaa nntnanatta aaaaagttgc aannatncng ngaaannтcc cnanaaacan 1080
tanatncnta tttannnntn acnncggngt nnccntaaaa anaactctnn nntnnctggn 1140
ttgtanatnt annncnanct cgcg 1164

<210> 624
<211> 798
<212> DNA
<213> Homo sapiens

<400> 624

ttgttaagcc tnttttcnaa ntccttcctt tnaaatcttt tgnaaacctt ggtanttgca 60
ggnatcccat cgattcgagt aaagcatcct gcctcagaat gactttccta tcatgcttta 120
tgtgtcattc caaggtttct tcatgagtca ttccaagttt tctagtccat accacagtgc 180
cttgcaaaaa acaccacatg aataaagcaa taaaatttga ttgttaagat acagtagtgg 240
accctactta ttcagtcaat taagagtaag ttttttttatg tggttattaa aacagtatga 300
acaattagtc taactctgca tagacagggt ctagattttg ttaacccaaa tgtataactg 360
cagttagctt aaattacaat ttgaagtctt gtggnttnta tatagctngg cactttatta 420
ctcttttgaa ctgaaagcac actcccttat aggttcatgt aactgtcctg taataaggtg 480
cttataaatg ggaacaacta cacagcctag ttttgncaca acctttagca tctaaaaaag 540
ttttaaaagc ttcttaaatg nctaatataa anggagatgc tnatanccac aacatctatt 600
ttaccaatat tngtttcctt acacttacct tgggantttg cattgagtga ngttttngta 660
aaccccaaan atncccatta atanaaaaaa nttggtacgt tttnatgact ttaatccann 720
ttncttgtng gnnttcncct aaaangcttn ccnnnggnnt ggaantnnna ntnatttntg 780
gggnaaggtt tnngttnt 798

<210> 625
<211> 793
<212> DNA
<213> Homo sapiens

<400> 625
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aggatcccat ccgattcgaa ttcggcacga ggaaatgcct ctatgtangt gaagtgttct 120
ctctgcatgc aacagtaaaa attaatataa tattttcccc acaaaagaaa cacttaacag 180
aggcaagtgc aatttataaa tttatatcta aaggggaatc atgattataa gtccttcagc 240
ccttggactc taaattgagg ggattaaaaa gaatttaaaa taattttgaa cgaatttatt 300
ttcccctcag tttttgaggg cattaaaaag gcattaaatc aagacaaatc atgtgcttga 360
gaaaaatataa attaatgaaa acacagcact tatgttggtt tagctgcagc ctccttggag 420
gtagaattta tttatttaaa attactggtt gcatcaagaa ccccataggg tgtacaaaag 480
gttctataaa atctgcatta tagagacaaa gangcaggca aatncatgtc acaagggtna 540
agcttacagt ttacaaactg gggaacgccc agggtgtang atttnaaaaa cgncactctt 600
gagaaaacan atgtaatcan ggntgctgaa aactttgcat ggnggctttn aagacattta 660
gnccttgttc aaaccaaaat ttnttggnat ttgccagatt ccttantntt gccatgggcc 720
atgacaccat ttttggcctt tatgncnctt taaaattttn aattaaaaat accntttcca 780
gtaannctaa ttn 793

<210> 626
<211> 825
<212> DNA
<213> Homo sapiens

<400> 626
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ctgnangatc ccatcgattc gaaacggcnc taggaatcat cgaaggttga gaccgtgacn 120
anttacatag tgatnaatac ccatctatgt actgnngcct nctaaatgtn tntctncnnn 180
atggannttn cctttaanct ctagatccat tgacancctg ancatntcta aaaggcatta 240
ngaaactgaa cacatctgat acagaactct gcattnnctt ccnaantntg cccannccna 300
gcctgntcct nnttcacgct tancacttat natatgatcc cactattcac tnantctctg 360
aagcttaaaa cctangattc atgcttgact actgnataat nntacaatct actcctaatg 420
cattagcaat tcttgctagc tctaccttca aaatatattc tgaatagact atntcttgcc 480
gnttcccttg cctncncatt tcccatctgc acccctttctc tnctncccaa aatcaataca 540

ctagntgttt ctaaaaaaaa tatnganann tagnnnaaaa ncntaaataa atntaaaana 600
angnntancn tnacanaana ttnctaatat aggnnannтn ntgncaanaa cnntaantnt 660
tnaatacgnn aaaactctct cnaanngann aannтatnnn agttaaaagn naaatannnn 720
aanantncca aatntanaag ataangncat aannntatna gncnnaacgc taantgnnga 780
tganntntaa tnngnatana nnantngtta nnacaaaatn tacnn 825

<210> 627
<211> 772
<212> DNA
<213> Homo sapiens

<400> 627
tttttaatgc ttngtcgnac ttctcccagn aatcgnttng aaactcngcn actcgttctc 60
tctgcangat cccatcgatt cggaaatttg cactgatggc tcanaaggct tacgttttgg 120
agagtatgac ctacctcaca gnagggatgc tggaccaacc tggctttccc gactgctcca 180
tcgaggcagc catggtgaag gtgttcanct ccgaggccgn ctgncagtgt gtgagtgagg 240
cnctgcagat cctcgggggc tngggctaca caagggacta tccgtacgag cgcatactgc 300
gtgacacccg catcctactc atcttcnagg gaaccaatga gattctccgg atgtacatcg 360
ncctgacggg tctgcagcat gccggccgca tcctgactac caggatccat gagcttaaac 420
aggccaaagt gagcacagtc atggataccg ttggccggag gcttcgggac tncctgggcc 480
naactgtgga cctggggctg acaggcaacc atngagttgt gcaccccagt cttgcngaca 540
gtgccaacaa atttgaggag aacacctact gctttanctc ngaccgtgag acacttgctg 600
ntnccntttg gcaaagacca tcatgganga ncanntnggt nctnaancng nntggccaac 660
atnctcatca acctgtattg gcatgnaccg cncttgctgn acnncngngc caaancnctc 720
nantccgcca ttggggcttc cggnaaccac tnnacaccaa ggttctnttg gc 772

<210> 628
<211> 808
<212> DNA
<213> Homo sapiens

<400> 628
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ttcggcacga gatgacatcc tcattatcca cantgcaaag ccaaccatcc ctatgatggg 120
ttcattgtgg atcatgactt antgggtcaa gagtttggaa gtggctcagc tgggcggnct 180
tctgctncat gtggctgcca natggtnccc tgctggtnng cagnctngtc tagagggtcc 240
atgatggctt tactcacatg cctggcatct tgacagggac agctggnang caaagnnnat 300
ctgggactgt ncacagagct ncttcntgtg gcctttccag catggtggtc taagggtagc 360
tggacttnct gcatnacagc tcagggctcc cagagctact gtcccaagag atnnaaagtg 420
gnaactgnca atcttttang ctaangncca gaaaccatta cccctgcacc ncacagtctt 480
tttntanctg ntgaaataaa cattnnnttt atcaattnta ancattcgca aattggaatt 540
aaataccttt tactaatttt gncgtgacca tctgcccctn gttcaagatc taaaaaactt 600
ttatngntca tcntgnngat ntaaaaaact nttgtgttng catttanaac ccntaagcan 660
nttnggcant tanannnaan annttnnnaa acccttntat anaaccttat taagttgang 720
catnngnant ttcnccttna aatccnaggt ccttagggct angnnatacc nttcntatng 780
naactttngg gaacctaaan cctctcct 808

<210> 629
<211> 827
<212> DNA
<213> Homo sapiens

<400> 629
ggccnncttt gaaccttntt caaatcnttt ggcactcgcc nctctctgnt ngntcccatc 60
gattcgctgt gatccaaggc atgaaaagag tgcaaggtaa ncangnggca gcnttnatng 120
aagcatnaaa taangcnaaa gcnnatgctn anctnangga gcangnngct aaagacaacc 180
acannctanc tgnntnctaa tcatgctntg cttnctnang tgancttata gnaacgcant 240
nagactncan gcnttgcttg gcncaacaag gnnacctana ntcatnanga agcnnttgaa 300
ctaangagtg gctacnncct ttnntnctca tgcntgacct gtaatnattc ttctganttg 360
aggcaanagc gggtnnaant natngntnan ntgnaaanac tntnnnatcc gnnnntnctg 420
attannttnc attnntntna atgatanann ctcatcnngc tcgncctgna ctttganang 480
ctnnnntcnn anntnnctga ctttaggagn nnacctncag cganatgtna agnanngaaa 540
ttnanntncc tnncgntccn ccttgcngac tnanngtctt gngnaacntn angtanntan 600
tctacngggn gnnacnttgg nnaattgggg ncttataaan tnttcntnna agaatgantg 660
naccaattnt nnaanntcta agnttgggga aatctnngtt tcctgnatnn gnacaaaaan 720
tcgatttann ngncnngntt nnttgggcnt catntgccat tgatgcnatt cnacttatgt 780
cctcntggng cntnttnnaa nnnggnngnn aacatttttt gtgtgcc 827

<210> 630
<211> 793
<212> DNA
<213> Homo sapiens

<400> 630
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tctctgcatg atcccatcga ttcgaattcg gcacgaggcg ngttgttcta cactgcnntc 120
ngaagntttn ntaanaagcc accacttagc ngaggcnnct acangtcttg gggncttagc 180
gaagagaaat cncgctggca cttgncccgt tcacntaagn actnntgnct gantccnagg 240
gtannngtnc accttgngnn ccancagaca nacccaannt gncntaaaan gggcaggtct 300
aagcttacnc tngactncac nggcaagctg nangcctgtn ctgccttccn ctgcnntnac 360
aaatngacag tnngaccaag agtcanagna aaaactncaa ggatacatnt atcccantct 420
nttctacacc tntanattcc ntganctatt gctcanaccn atcgtgcggg caaaggcaag 480
acttgggcaa cattnttnaa tacaatgatg ctgacaanta atttccngct ngttgccagg 540
natntttacn cgagctnttg tgattccaaa ctaaagaatg gngccnnnan gcccntcntt 600
antnctggnc ccccanaang ancctaactn gcgaaaggnn agnatggcat tnacccaaac 660
caacttntng gattacnnca actccanaan atccgacggc atnnaanang caaaacaaca 720
acttcncnan natnnaanna atngnnccnn aaananaacc cgngcntctn aaacnattgt 780
ggacccatnc ccc 793

<210> 631
<211> 752
<212> DNA
<213> Homo sapiens

<400> 631
gnagtnncct tnganccctct ntnaaatcgc tttngcnant cgcctctttc tgntngatcc 60
catcgattcg aattcggcac gagatgttac agacatgaaa tatgaacaga atnctaaaag 120
aacataaaag aataagagct ccttaaagat tataaataaa tggtgatgtt aaagtaatag 180
caccattgga cgaagctagg gaatcaacac ttgacagaaa gatacatatt ttttttatac 240
aaactacata tatttgagca atcaagtagt agacatagag aattttcttt ttatggaagt 300
actctaataa gtaaagggct gatagaatta tatcagcatt ttctagctcc tggtgaatta 360
tgcattgggc atccatggct gccttagatc acaaaaatac caccagatat atgcctgtgg 420
atgaaagatc acaccaccac ctgtgaaata gtcttcccca caaaaaatcc aacccaaatc 480

ctatccagcc tgtagatggt actcgagatc ttctataaga aataaagaga gcangctggt 540
cacggtggat tgtgcctgta atcccagcac tntgggaggc caangcaggt ggatcgcctg 600
angtaaagaa gttcnagacc agcctgccaa catggtgaaa ccccccctctn tacttaaaag 660
taccnaggat gagcccggcc gttgtggcaa gcacctgtgg tccccagcta cttgggaagc 720
tgagcangaa aaatcgcttg aanctgggga ng 752

<210> 632
<211> 751
<212> DNA
<213> Homo sapiens

<400> 632
gnnnnnnttn nnnnnttcta atgcttggct actcgttctt tntgcaggat cccatcgatt 60
cgcaactaga gaagattgga cagcaggtcg acagagaacc tggagatgta gctactccac 120
cacggaagag aaagaagata gtggttgaag ccccagcaaa ggaaatggag aaggtagagg 180
agatgccaca taaaccacag aaagatgaag atctgacaca ggattatgaa gaatggaaaa 240
gaaaaatttt ggaaaatgct gccagtgctc aaaaggctac agcagagtga tttcagcttc 300
caaactggta tacattccaa actgatagta cattgccatc tccaggaaga cttgacggct 360
ttgggatttt gtttaaactt ttataataag gatcctaaga ctgttgcctt taaatagcaa 420
agcagcctac ctggaggcta agtctgggca gtgggctggc ccctggtgtg agcattagac 480
cagccacagt gcctgattgg tatagcctta tgtgctttcc tacaaaatgg aattggaggc 540
cgggcgcant ggctcacgcc tgtaatccca gcactttggg aggccaaggt gggtggatca 600
cctgaggtca aggagctcga gaccagcctg gccaacatgg tgaaacccca ttcttttctt 660
aaaaatacca aaaaatttag cccangtgtt gaatggntgc atgcctgtaa ttcccagctt 720
ctnanntagg ctnanacaag gagcttncnt t 751

<210> 633
<211> 806
<212> DNA
<213> Homo sapiens

<400> 633
ttnnannncn ttttnaaaag gcctnnnntt gannctttcn aatgcttggc tactngntct 60
ttctgcanga tcccatcgat tcgaattcgg ctntagggaa ggggagggtt ggtgagtccc 120
agaccttaaa aatacaaggt taagagggac cccaaagcaa aaaattccaa ccctttttcct 180
cccagtcatt gaaacaccaa aactattata ccggagggtg taatagtttt gctgcccagt 240
tgtggtaggc cagtagtggc ctcccaagat gcccatgtcc taatcccagg aacctgtcaa 300
aattaccttg tatggccaaa ggggctttgc agatgtaatg aagttaagga tctttcgcca 360
ggaagattat cccagcttgt cangagggct tgatgtcctc acccgggtct gtataacaga 420
agagcaggtg acgggagagg aggttggagg tgtancgatg gacangaaac tggagttata 480
ggagggcagc tnaagccaca gaatccaggc cancttanga gcccaggaaa atgcatttct 540
ttccacaaaa gcccttggaa ggccccaanc cctgcttccc acccttggac tnggcttcaa 600
tgaggcttaa tttttataaa ttcntggctt gattttagaa ctcntaaggg gaaataaatt 660
ttgtgttngn tttaantcan aaaataaatn aattaaaaaa aacttgaanc ctttanaaac 720
tntantggaa ttcntattan cttaaanccn aancttggat taaaggatnc atttgtttna 780
antttggga cnaaccccca anttnt 806

<210> 634
<211> 775
<212> DNA
<213> Homo sapiens

<400> 634
ngggacttcg cctnacgaac cgctnggaaa tcccntntnt gnaggatccc atcgattcga 60
attcggcacg agtataaact ttattttatt ctcttctggt tttgtgttac atgacaagaa 120
attgaattaa nncaatanaa ttttagttcg ggttgcttag gtttttactg ctcccattct 180
tgcttttact aatttatcca agattagatg tgattactat ttaataataa tttagtcctc 240
acacttacaa accacttaca ataccagcat gcttctatca ctgtaattct attcaattct 300
caggcccatg aggcatgcca gccagacgac cagacagcat ttatagagtg ggcactcaat 360
accagccaca aaagatcctg tgtcagaagg ggaaacaggc ttggaggctt ggagtatgtc 420
gtgatagcct ccctccagtc cacacaactg gtactgctgg ggctgaaact agaactcang 480
cctatgcctc tcaagctcaa gggtcggatg tccatgtnct tcgcctctag aactatannn 540
gagtcgnaat tacgtagatc caagacatgg gtaagataca tnggatgagt tnggaccaac 600
ccaccaacct aagaatgcan tggaaaaaaa tgcttaattt ggtgaaaaat ttgtgatggc 660
tattnngctt aaatttngnn aaccatttna taaagnctng cnantaaaan aaaggtttaa 720
ccaacccaac caattggcaa ttccatttca anggtttcaa gggtccaang ggggg 775

<210> 635
<211> 784
<212> DNA
<213> Homo sapiens

<400> 635
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ccatcgattc gaattcggca cgagatatag ctctggaggt caggacatag gagatattga 120
ttcaggactt gccagagtat ggtcttgggg tgtgccctga tattacaaac agggatctta 180
gtggctaggt gatgaggcca tggcaaatgt agatggacca agatcaattt gcctttctag 240
atgaggtttt ctaggtgaaa tgtttttgaa actattttgt agcctagtat aatttataaa 300
agtagagaga aactataaat ataaatttgg aangggttag ctaaaaggag aaaacagcan 360
aatcttcata tatatanaaa tggatattaa tttgctagaa ttaanagact gcaggtaaag 420
atagnttttt ttaatacctc tttttgctgt anaaaggaca ggattaaatg atnaagggat 480
gctggaatga ggaatggtaa ctttaggcaa gatagtcttc tgngacggct gatatgaaca 540
atngagagta anacatttnn aatacaanaa attgtcctgc tgctcaccca tcaagccttt 600
tcangtttct tcccttgcca aaantngtaa naacttntgg tacttttnna ncttgtatnn 660
ttccngttna ttggttanaa ccccttcgat naanaanncc atantttnaa tttgggnttg 720
acccccnagg ttaaaanttn ccntttnctc aatttcccct tttcaaagnt ttaacntaat 780
taan 784

<210> 636
<211> 765
<212> DNA
<213> Homo sapiens

<400> 636
ttnnannctt tcnaatnctt ggcnactcgt tctttctgca ggatcccatc gattcgtcct 60
gcgcaggagc cgcagggccg taggcagcca tggcgcccag ccggaatggc atggtcttga 120
agccccactt ccacaaggac tggcagcggc gcgtggccac gtggttcaac cagccggccc 180
ggaagatccg cagacgtaag gcccggcaag ccaaggcgcg ccgcatcgct ccgcgccccg 240
cgtcgggtcc catccggccc atcgtgcgct gccccacggt tcggtaccac acgaaggtgc 300
gcgccggccg cggcttcagc ctggaggagc tcagggtggc cggcattcac aagaaggtgg 360
cccggaccat cggcatttct gtggatccga ggaggcngga acaagtccac ggagtccctg 420
caggccaacg tgcagnggct tgaaggagta ccgctccaaa ctcatcctct tcccaggaag 480
ccctcngccc ccaagaaggg aagacaagtt cttgctgaan gaacttgaaa cttggcccac 540

ccaactgaac cgggacccgg tcatgcccgt tccnggaaan gtctattata aaggagaaag 600
cttcgagtca tcanttgang gaanaagaag aatttcaaaa gccttcgctt atnttcngta 660
ttngcccgtg ccaaacnccc cngctttttn ggcttaccgg ccaaaaagaa gccaanggan 720
gcccnnanaa cagggatntt gaaaaagaaa naatnaaacc ctcnn 765

<210> 637
<211> 853
<212> DNA
<213> Homo sapiens

<400> 637
ttttggancc nttctttgan nctttctaat gctgggntac tcgntctctc tgcaggntcc 60
catcgattcg aattcggcnc gaggatcagc ccacctcggc ctcncaaagt gctgggatta 120
caggcgtgag ccaccttgcc cagcccacat catacagttt gaaatgaaac tttgccacaa 180
ccagcctttg ctgtagcaca cacatatatc actgaacctg tttgaaataa agttttttt 240
ctttntcctc tggtattctg ggttctgaag tctggtattc tggtattctg ggttcaaaag 300
tatgacttga gagtgttgct ctggtattct gagagttgct ctgtattctg ggttctgaag 360
attatttgaa aaataactcc tactacattg aaatgcagac ttaaaaattt aaacattgga 420
ttangcagtc aaaaaaacca agcaagcata aaaggtcaat aagttgtaat cttgatagta 480
aaggtggaaa acttattata aatggnaang aaagttttat ttccttttt gtttgaatgg 540
gcaagtatgc catattatac ccaaaagttc ttttaaaaaa atatttccca ttcaacccat 600
ttttaattna aaattaaaac cattttgnaa gggaaanttt acccaanggc aanccttttt 660
tttcctccaa aaaggttnac cntgttnatc cttctttttn ggnaaattta nccaccaatt 720
tttttaaagg ngggncaatg gggnttaaaa ntanccctgn aagnnatttt ttnanccttc 780
caggtttaaa antccccttg gatngggtct taacctgggn gggtngnata naaaaaaata 840
natcctnttt anc 853

<210> 638
<211> 740
<212> DNA
<213> Homo sapiens

<400> 638
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atgcggctgg ggcggaaaca ccggacacgc ctggcagaaa tcatcgacga ttgtgtgaca 180
agtgaagaag aagaagagtt agaggaggag gaggaggagg acccggaaga agataggaaa 240
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ctggctccca cggaggggcc gcccctgcag gccctgggcc agccctcagg ctccttcatc 360
tgtgaaatgc ccaactgtgg ggctgtgttc agctcccgac aggcactgaa tggccatgcc 420
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cagaagcctg gtggcaccca gagtgggtac tgttcggtaa agagctcacc ctctcacagc 540
accaccagcg gcgagacaga ccccaccacc atcttccctg caaggagtgt ggcaaagtct 600
tcttcaagat caaaagccga aatgcacaca tgaaaactta cangcagcan gaggaacaac 660
agangcaaaa aggcttaaaa aggcggtttt tcagctgaaa tggcaccnnc aattganagg 720
actacngggc cccgtggggg 740

<210> 639
<211> 774
<212> DNA
<213> Homo sapiens

<400> 639

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catcaggatc acctgtgggc cttcannaat cananatnca cccccaggcc atgccctnga 180
cccagtgcac caggacaaga aatccacccc aggcctctcc cnagacccac tgnaccagna 240
caagaaatcc acccccangc cangccccnt acncactgcc ctangatntn nnggtgtnaa 300
ccnggtggtg ctttgtaaag acgtgcangt ggtaacccca cgccgncncn ctcnnnacnt 360
tggacacatg atcatccacg tgtctgtgat ttgnttcctc ggnttnnttt gtgaatngaa 420
aataantgtn ncgtttgact agggtttaag agcagcaggc agncctcag ctcagcaagc 480
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cgggaatgaa gaaactggtc aagctggatt cgggactgaa agtgtaccnt ggtgacaccg 600
tatgactnan ctgactnana aagatcactn atctttccac acttgnnggg naggagccnn 660
tannangttc aatatgcnnt ggtngantcc catngctaca atttcatgga cacantttga 720
ttacttnnga taannnaggc ccttggaggc cccttntccc cttttaacng gaat 774

<210> 640
<211> 743
<212> DNA
<213> Homo sapiens

<400> 640

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tcaaangngc tagaaggtgc tgacctttтn agactcttgc agaagaggcg angtggtgng 420
anaccctnna ggaanacttt cccgaactag accncnnctt ncngaacnng ntcaactgtt 480
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ccttaaggac ccttatatcc agacnatcct ttggataata ccnctnggcc aaaacctnnt 660
aactntgcat acaatcngga tggcaacatt tgaactggng gccttnanna ccnttaccgg 720
cttttcncat tatgnaagag ntn 743

<210> 641
<211> 740
<212> DNA
<213> Homo sapiens

<400> 641

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ttgaagagca attatatttt tcaaaaagag ttttgaataa tgttaagata gattgcaaca 180
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caataaccag acacgggact gaggccatcc atgaccagcc agccctagtc aacacacaac 480
acacaagctg atcacagatg catgagtaag cctaactgag accagccaag accagcctag 540
aatagaactg ctcagcagca ataaaaacta aataaattgt taccttaagc tacttttaga 600

gctatttgga agtgtatttt tgtgcagcta acatttacta tcagataaaa tggtgattgn 660
ttatctctgn tttaatgatg ntttaaggaa atggttctat taaaaggaaa tatctggggc 720
tttgtcaccg ttaaaaaaat 740

<210> 642
<211> 737
<212> DNA
<213> Homo sapiens

<400> 642
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ccgtgggctc aggtggcagc tatggagccg aggatgaggt ggaggaggag agtgacaagg 180
ccgcgctcct gcaggagcag cagcagcagc agcagccggg attctggacc ttcagctact 240
atcagagctt ctttgacgtg gacacctcac aggtcctgga ccggatcaaa ggctcactgc 300
tgccccggcc tggccacaac tttgtgcggc accatctgcg gaatcggccg gatctgtatg 360
gccccttctg gatctgtgcc acgttggcct ttgtcctggc cgtcactggc aacctgacgc 420
tggtgctggc ccagaggagg gacccctcca tccactacag cccccagttc cacaaggtga 480
ccgtggcagg catcagcatc tactgctatg cgtggctggt gcccctggcc ctgtggggct 540
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gtgcatctac ngntacttcc tctttgcttc atccccatgg tggtcctgtg gctcatccct 660
gtgccttggc ttgaatggct ttttggggcc tggncctggg ctgttaaacc gccgggctgg 720
natttaacct ntnggcn 737

<210> 643
<211> 748
<212> DNA
<213> Homo sapiens

<400> 643
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ggtattatga attagcacaa gtattgcttg ctatgcatgc taatgttgaa gatcgaggga 180
ataaaggaga cataactccc ctgatggcag cttccagtgg aggttactta gatattgtga 240
aattattact tcttcatgat gctgatgtca actcccagtc tgcaacagga aacactgcgc 300
taacttatgc atgtgctgga ggatttgtat gacattgtta aagtgctcct taatgaaggt 360
gcaaatatag aagatcataa tgaaaatgga catactccct taatggaagc agccagngca 420
ggtcatgtgg aagttgcaag agttctttta gatcatggng caagcatcan cactcattct 480
aatgaattca aagaaangtg ctctaacact ngcttgctac aaangccatt tggatatggg 540
gcgctttcta cntgaagctg gtgcagatca agagcncaaa acagatgana tgcacactgc 600
cttaatggan gcctgcatgg atnggacatg tanaggtggc acgtttgctt tttggatant 660
nggtgctcan gtgaacatgc ctgcataatc atnttgaatc tccattgacg ctagctgcct 720
gtgganggac atgttgaaat tgcngcct 748

<210> 644
<211> 759
<212> DNA
<213> Homo sapiens

<400> 644
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gagggaacca tgananccna gagctagaat tgctattgga tnncgtctat tctctntttg 120
cttattgggn cgngntncgt ggttnctggc ctcangggtn nncccgaang anggggtatc 180
tnngagcnan ttntgcnntt tacnggctag cttgntgggg gcttaannтg ccactnttan 240
acatgctnta ctantcantg agannntncn ntcgaccatn tannacnatn ctgtgnnntc 300
cngtacnctn tggccgnatg gagctattag cttcaanatg nntcgnantg ttacatgcan 360
ncactgannt nactatccan natntaagtn ctcttngctt actgtgaaca nnngctactn 420
ncttggatat tatagnaagg ntcnttgata cncgatnatc ntncntgtca gatcnataaa 480
tancanctat accnactgtn naaatnccat ctggnggnct tncnatccan acataattgc 540
attannncgt cnaattgnga tanagtnttg aaagantctn ggtttagacn ttggatgttg 600
caatgnttgt gncttanaan ttatgtgctg gctactgant aanctggggg catgacntta 660
ctggnttgac ctaagnggng aantcnatgg tccgattgct ggncctanc cttaagnttt 720
gccatgaata ggnctttgc cctaaaataa nacccctttt 759

<210> 645
<211> 766
<212> DNA
<213> Homo sapiens

<400> 645
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cctctaaaca cgaaaagaaa gaagattcca ttantgaatt tttaagtttg gtttnatcaa 120
aagccgagcc acctangcaa cagtccaccc ccttagtaaa caaagaggaa nagcatgcac 180
cagaatcatc cgcaaatnag acagtcaaca aagatgtgga cgcacaggct gaangagaag 240
gganccgcca tccatggact tattcatggc catctttgcc agttcctcat atgaaaagtc 300
ctnatcctgc gangatganc acggtgacag tnaanatgat caggcacgct ctggngagga 360
caacttccaa agctggnaag acactgactt ggnggaaaca tcatctgtgg ctcacgctnt 420
tgtgccagng ccctaggagc cgtcaccttc cttcccgata caaangatgc agatagatna 480
naganaagag ntcggccngn ngctgcctcc cgtcttatgt nccaatgctc gtcagacact 540
tgaagttnct canaaagaga aacattccaa gaacaaagac nagcacaang gcaatanaga 600
acacaggccn gaaagaattg anangaaatt ggaaacactn gaagcacnaa acacctaang 660
naatccaaaa naattggcaa accaggggaa aagtaggtnc ctncgngaag tttcgacagc 720
cngcggacaa gccanaattg acnatgaaac cgcatacgtg tcttnc 766

<210> 646
<211> 752
<212> DNA
<213> Homo sapiens

<400> 646
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atccacctcg cagcttgtaa atctacagcc tgattacatc aaccccagag ccgtgcagct 120
gggctccctt ctcgtccgcg gcctcaccac tctggtttta gtcaacagcg catgtggctt 180
cccctggaag acgagtgatt tcatgccctg gaatgtattt gacgggaagc tttttcatca 240
gaagtacttg caatctgaaa agggttatgc tgtggaggtt cttttagaac aaaatagatc 300
tcggctcacc aaattccaca acctgaaggc agtcgtctgc aaggcctgca tgaaggagaa 360
cagacgcatc actggccgag cccactgggg ctcacaccac gcagggaggt ggggaagaca 420
gggctccagc taccacagga cgggctctgg gtatagccgt tccagtcagg gacagccgtg 480
gagagaccag ggaccaggaa gcagacagta tgagcatgac cagtggagaa ggtactagtc 540
aaccttcaga aagagtatgg agagaaaaag aggcacacct ggacgcagag ccctgccagc 600
gccctctctg ctgttgcagc tgcaaggaga ccatgcctgt gggagccagg cctcgcttgc 660
atgaanaagg aacgatgcct ttttcaatgg tgtcttcctt ccattgtgca naanaacctt 720

ttggtggctt ctcttccgac ttgtgcctga tt 752

<210> 647
<211> 743
<212> DNA
<213> Homo sapiens

<400> 647
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ccggcttccc ccggagtggg tcaccacact gttttttatc atcatgggaa tcatttcatt 120
gactgtcaca tgtggtttgc tggtggcttc ccactggcga agagaagcta caaaatatgc 180
tcgatggata gcattcactg gaaccactat gagaagatta taggaaaaac accaagacta 240
gaggactctg ggttcctttt atgcaaagtc aactcttctg ggtcacagtt acccagcaac 300
aaaaataaag agaggaccag gacgatgcca gcaccccgtt tatcctgagt gaactctccg 360
gaggcctctt caagcttgtg ggttctctgc tgtcttgaag ccatccatcc atttgatagg 420
ttttgcaaag acttggtcct gccaagatgg ttttaatcat ttctgctaaa aggaatggac 480
tcgaggattt gatctcattt tagatgcagt tgtcctcact tggccatttt acagcacttt 540
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ggcaactcag tgaactaaat actatgttct gacctctggc actctttctc atgttggtta 660
aatatttaat attgnctaag gcaattcaag tatttttctt aaataaaaaa tatgaaaact 720
caaaaaaaaa aaaaaaaaan ana 743

<210> 648
<211> 759
<212> DNA
<213> Homo sapiens

<400> 648
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ggtgattgga ttaacaattt tattctgnnt ccactacaaa ngggctggtg ttttgttcca 120
aatgtttagc tgggagggct gtagggaccc ctgttacccc cattaaacac agtaaagcat 180
ggatccagtc agccccctgc tggcaggtgt gggcctggca actacacaga tccaacccca 240
ccctcctggg tgcggccaga ggccaaggca gtcgcccgag ctcctgaatc ccaagaatgg 300
ttctggcaag tactgctgtt tgtttgtagg ggcaaagagt taaaataaaa cgaggttctg 360
ccatggctaa gccttgtgga aaccagaccc caaagcccct gccatgccan gggtctcaac 420
nccagacgct tgttatggag gcaccancng gtantggccc ctgtaagcan ggccagagtc 480
gggacaaaga gcaagantga aacanccaag agacanagga ccatgctgga ccattgggca 540
cncangaacc tgcctgggaa aaaccggggg gcaangctgg catgggaatg aacacctgct 600
tgntgacacc tatntgagct tcanttncct taacttgaaa aattgaacan gcccggtncg 660
gtggctcata ccctgtaatc ccancacttt tgggangctt tangccgntt ggatcattga 720
ngttaggaag attaaagaac cancctgggc cnacattgg 759

<210> 649
<211> 746
<212> DNA
<213> Homo sapiens

<400> 649
tnancctttg aatccttgaa ngnngatccc tcgattcgcc ggaacctcat ccagtgccac 60
ccatcttgac accttctccc tcttcagctt ttccaacagt cactactgtg tggcaggaca 120
atgatagata ccatccaaag ccagtgttgc atatggtttc atcagaacaa cattcagcag 180

acctcaacag aaactatagt aaatcaacag aacttccagg gaaaaatgaa tcaacaattg 240
aacagataga taaaaaattg gaacgaaatt taagttttga gattaagaag gtccctctcc 300
aagagggacc aaaaagtttt gatgggaaca cacttttgaa taggggacat gcaattaaaa 360
ttaaatctgc ttcaccttgt atagctgata aaatctctaa gccacaggaa ttaagttcag 420
atctaaatgt cggtgatact tcccagaatt cttgtgtgga ctgcagtgta acacaatcaa 480
acaaagtttc agttactcca ccagaagaat cccagaattc agacacacct tcaaggccag 540
accgcttgcc tcttgatgag aaaggacatg taacgtggca tttcatggac ctgaaaatcc 600
atacccatac ctgatttatc tgaangcaat tcctcagatt tcaactatca aaactaggga 660
aaactgngag tttaacacca agtnctacaa cacaaggttg gaaacacctg aacttggngg 720
atcatgatac cacttnacca ctccnt 746

<210> 650
<211> 789
<212> DNA
<213> Homo sapiens

<400> 650
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tccctcgttc gctgnacaaa agatgttttt caattaaaag acttggagaa nnttgctccc 120
aaagagaaan gcattactgn tgtgtcagtn aaaggaancc ttcaaagctt tattngatga 180
tgggtttggt tggactgtga gaggatcgga acttctaatt attattgggc ttttccaagt 240
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gaagtcaaaa gcatgcaagc ctacagaaaa gcattgagaa agctaaaatt ggcccgatgt 360
gaaacggaag agcgaaccag gctagcaaaa gagctttctt cacttcgaga ccaaagggaa 420
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ccccaagcaa attaagtagc caaaagaagc tgctaacagg atggactgat taccatattc 540
gcaataaaat cttgggccaa aagaaaattt gggttttgaa agaaaataaa aattgatngg 600
aacttttgg aattccagaa gactttgact acatagactt aaaatattcc atggttggtg 660
aaaggatgta ccaagctttg tgaaatattg taaattttta aacctattat ctactaaagt 720
ngtactggaa ttgtccnttt gcctgttnac ttgnggtnta ntcatttnta tttaatgntn 780
aaattaang 789

<210> 651
<211> 757
<212> DNA
<213> Homo sapiens

<400> 651
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agatatttac tgaaggaatc taggttgttt tttcagtgga caatgggaat aanncatttc 120
taaagcaccg actggagagg aaggcaacag agacaaggag agaagccgag agacatgtct 180
gcgtgctgcc acgcatctga gcgattgctc tgtgaagagt tgtacactga acattttcag 240
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ataacaagat ggccctgcag ctggttacag gaatgtgaca tggcaggatc tatggaacca 420
aatggaaggt tttnaggtga tgtaggtctt tcacagttag ctttggggaa tacagaatac 480
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atttcttggt ggtagctatt tgggtaaang tatatggata tttntctgta catgtgaaat 600
tatntaaaat aaaagttata taaattacat tgacaaaaaa aanangtana aaaaaaactc 660
gaacctttaa aaactatngt ggagtccgta ttacgttaga tccagacctt gataaganac 720
cattgatgaa ttttggacaa accccactng aatgcnn 757

<210> 652
<211> 759
<212> DNA
<213> Homo sapiens

<400> 652
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gaggctgncc aggcagttnn atggcctnct ggttgtgtgc cttcacaccc gcctacagcc 120
ccacctcacc atcaagcgct gagccaatgc ggntgtggct ggccctgagt tcctgagtca 180
gctccttgcc agggccagag ctggtnacag cggggcanca nggtgggtag cctctaccag 240
ncagggcagt ccctgagggg ccagcanggg ggctgactgc ctagtggctn aacctactga 300
acccacccac tcccagcgat gctacccaga accccaacgg cntgaatcct gcacantgcc 360
gggcantgcc agactcnaaa gggctcgctg tggggacagc cccgtcatgg ccacanactc 420
tgtcctcacc tttgattgtc aggatgacag nccccaccac catgatgagc gtctgcaggg 480
cgtccgtgta gattacagca gccaggcccc ctgccaatgg aagcaaggtt gctggaaggg 540
gccctggtcc agggaggaag gacaccggga ggaacttctg ggcttctgct ggggccactt 600
cctgggctgn tnctcnggnc tgtatgggga agtggccttn tgaccccttt acacgttccc 660
tgggtggacc ttccctgntt gcangcaccc ataccttgcg atggtgtnca nggctnttga 720
tgcccnaaac tttaggattg ttggatangt nnaatctnc 759

<210> 653
<211> 820
<212> DNA
<213> Homo sapiens

<400> 653
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acagtccagg ctctgcagac agcatcccac ctgtcccagn tngctgacct gaggagcatc 120
gtggnggaga ttgaggacct tgtngctcgc ctggatgaac tcgngggcnt gtatctccag 180
ncanaanaan gacngcatac aacagaccat tangangntg tcatctacan tntnanngat 240
catntgngna cngacccatc cattaatgag gatcanggcn tccanctgat gaacgctgat 300
cttctgcaan aagaacgttc tagntctanc nnanngccnt cancctncgn ctcttgagct 360
cagtgngtca ngctcntaan atcttnncac ntgccaanct gtgnggnctg ccttnagnct 420
tccggatagg cactntnatn ngacntgccc tatanttgcc ngcngnnant naaccaantg 480
naccatngtc actctgttga catcanggcn atntgnntaa actaatnnct tngcngcact 540
ctagtnngcg ttgncactgc ccncgtnnnc tancntacca nttcncattn cccntttaat 600
gggnaaagan atnatcccta cnatcatatt ncccntnnaa tggattcgag ncgnaantct 660
tnnntantna tctnaancct aaatgntcac atnnaaactt tanangncat cnnnnatgna 720
accnancnat ggctaaangg cctcattaan gccngntttt tcaaacttga aaantgcatn 780
ccnccattga naaagganta cacgggcccc cntgngnggg 820

<210> 654
<211> 768
<212> DNA
<213> Homo sapiens

<400> 654
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tcgattcgcc acatttaagt gagatatggg aaggaggagc agattgtttt tgaagggagg 120
aagagcagtt acttagggtc aaattaagtt gtaaaatccc ccccgggatt ttgtatgtaa 180
gtcaaagtga attgtatttg gaagaagaac tggggagccc acctctggta ttttttttat 240

gtccctcata tggacaaata aacctctggt attaaatgaa ttttcttttg ggggattcta 300
tatattcggg atttcaacca ccaacctatc tggtttttcc cgctgaaatg ttgggtgatg 360
gaatcaggag agcagatttg gagactcttt atattttata attgagagag acaaagagaa 420
aaccgtttga tttgaaaaag ttttctaggt tccctcaggt agatggaaat tttcatcaaa 480
aacagtttat tcaaggtaca tagcctacta gtttcccatt tgagagtacc gcagaatgat 540
acgacgtgta ctgcttctct acgcagaatg aagtataaaa ttagcaccna atagtacttt 600
aatttgcagg tgctaaactt tttacatgct tnatctcatt taattcttag aagaaactaa 660
ttttaccaag taaantgtct ggaccaacca tntgcaggtc caaaannctg gaaaaaccgt 720
naggtttgga ctcctacata gcctnttttn taagtnncnt nntaaatn 768

<210> 655
<211> 752
<212> DNA
<213> Homo sapiens

<400> 655
tntncctntt gatccttgca ctannaaatc cgtggatccc tcgattcgaa ttcggcacga 60
gggtaaacct atttatataa tagaaggatg attataaaca tttaataaat tatatcaaat 120
agatattata tattaaatgg gcagataata gaaatctgtc caagcaaaac tctggataat 180
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cttgtttata tgtttgaaga catacatatt tcacatttca gaagagtcta tacatagctc 420
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gccttccaag tagcanggac caccaggtgc accccactat gcccagctta atttttgna 660
ttttattgga cagattgggg ttttgcccat gttattcagg ctggatcctt nnggcctcaa 720
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<210> 656
<211> 754
<212> DNA
<213> Homo sapiens

<400> 656
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ccagggtgat ggcaggcacc ttgaagctgg aggataagca gcggctggcc cangaggagg 180
agagtgaggc caagcgcctg gccattatga tgatgaagaa gcgggagaag tacctgtacc 240
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ggaaagccca cgatgaggcg gtgaggtctg agaagaaggc caagaaggca aggccggagt 360
gagtgcctgc ggcccctcac agggctgang ccagccccta tcagctggat gtggcagagg 420
catgccanag gacctaagtg tgatggacca gantcacttc tnctcctcct ttctncacca 480
gccctgaccc ctcatgctct ctggctgggc cantgggcaa ccctcgcttc cttggatgga 540
ctgcctgctg gtgcctggtc agagaanagc ctnttttccc agnctgattc tntgctccca 600
ggaaccaatt gaccatnaag gtgcaaangc cnanccaatc cccttacnta ctggccccca 660
ttnattcctg gctttttcan aagcccccnt gccaaacann ttgggacccc ctgattnntt 720
aagggtgcct tttnatnggg gttaaaggtt aant 754

<210> 657

<211> 734
<212> DNA
<213> Homo sapiens

<400> 657
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cgcaggagct gtggcggttt tcctaatcct gcgnttatgg gtagtgcttc nttccatgga 120
cgttacgccc cgggagtctc tcagtatctt ggtagtggct gggtccggtg ggcataccac 180
tgagatcctg aggctgcttg ggagcttgtc caatgcctac tcacctagac attatgtcat 240
tgctgacact gatgaaatga ntgccantna aatnaantcn tnngaactan ancgagctga 300
ttganaccct agtaacatgt ataccaaata ctacattcac cgaattccaa gaagccggga 360
ggttcagcag tcctggncct ncaccgnttt caccaccttg cactccatgt ggctctcctt 420
tnccctaatt cacagggnga agccngattt ggtgatgngt tacngaccac gaacatgtgt 480
tcctatctgn gtatctgncc ttatccantg ggatactagg aataaagaaa gtgatcattg 540
ntactttcaa agcatctgcc gggttgaaac gatntncatg tcccnaaaga tttgttgatn 600
tgcagctnct cantgctann gtcggttttg aanaaagttt nccaaatnnn tgtaccttgg 660
gccaatttnt ngacaantng aactgacttg tnagaatctt gcagntaacn gtcttgtntc 720
ntccaattng ggng 734

<210> 658
<211> 783
<212> DNA
<213> Homo sapiens

<400> 658
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catcctccag ttcctgggtt caagccatcc ctcctgcctc agcctcccca gtagctggaa 180
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tgaaaaggta tnatgaggtg gtacttatca tngttactgt gtctcatgtt nngtatattt 420
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aaagaatggg naattttcan angcnnggaa gtatttgntn ttttgtaaat ggacttgaaa 660
agcttgttct gnnggattgg acccaacccc tttccctttn aaaccccgaa ttctnatnga 720
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ccg 783

<210> 659
<211> 741
<212> DNA
<213> Homo sapiens

<400> 659
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ctctggagtg agctaaattg atcccaatta agtttttctg cttagcagac agaaggtata 240
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tttgtctcac tgaattctta tcatggaaac agcagcagca gccgctagga aatcttcaag 480
tgtagtgtct gtgctaaccc agtggtaaat cccttagatc ccctgctggt ctctggcagt 540
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ggtaagcacc cttaattcan gcactgtcca ttagcttcct ttgcaaaagc tacttatggn 660
cggtcacaat ncaacactna nacagagcca aggcaatatc ctcttgccca tggctatgat 720
gtcagacagt ggatggctcn t 741

<210> 660
<211> 734
<212> DNA
<213> Homo sapiens

<400> 660
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gaggactgga gaagtcagaa gtagaaaagc agattgctag gagagacagg atgacagatt 120
ttggtcagaa aatgggatat tggagtttaa agtatcaaat acagaatagt tccagatgtt 180
cagagatcca gcatgggatt aggtactgaa atggattaga actaaaagtc actagaattt 240
agaaattgag aaccatgaga gtggatgcaa tgacttgttg cttgattgaa aaataaatta 300
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atactgtgct aagcccctac ctgtactcct ctcccacagc tgcattccag ccctgtggta 600
taaaaggtgt gagaatgagc ttttccacca gaatcagcag gtttagttaa agcatgagca 660
gaacaagcat nctatgaaga gactgaggat gtaggtgagt ggtctaaatc tcatnnaagg 720
acattgcagt ngat 734

<210> 661
<211> 762
<212> DNA
<213> Homo sapiens

<400> 661
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attcgaattc ggcacgaggt ccatacatgg agctccctgg agcccgtgtg ntntcgtgtg 120
actgaacgtt ttgtgatgaa aggaggagag gctgtctgcc tttatgagga gccagtgtct 180
gaattgctga ggagatgtgg gaattgcaca cgggaaagct gtgtggtttc cttttacctt 240
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gccntngggc tctgcaaggc gcanatcact gccatcatct ntcagcaagg ngacntatat 360
gtnnntgacc tgnagacctc agctgacnct nccttngtan ggttngatnt nggaagcatc 420
ccaaggngat ttagngacnn tggantcctn atnactgata anacncnaac tatantnttt 480
tacccttggn agcccaccag caagaatgag ttggagcaat cttttcatgt gacctnctta 540
acanatatac tctgaatgaa tctacgttgt atttatcagg nggacaatgg gaataaagcn 600
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<210> 662
<211> 745

<212> DNA
<213> Homo sapiens

<400> 662
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cagagtgcat ttttacacgg ctagcagggg ttgagactgc agcctggcct gccagccatt 180
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cagctgggca ctaatgtctg ccaccgacta tgttaaagtg tataaatgat tcctctattt 480
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cctgctccct tttgatagtg gcttctgggt actcgggcnn gtncttggga caccancctt 660
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ctntattggg aggatngctn ntcct 745

<210> 663
<211> 748
<212> DNA
<213> Homo sapiens

<400> 663
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agggcaagtt tccaaagatc agtgtggagt gctacagaaa taattatagg agaggaaatc 120
ataatcacag aaggtataat gcttgtttga ggctccggaa taagaactaa aaaaaaacaa 180
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taataccaaa caatccttga tgcttcacct ggggctgcca agcagtttgt aaaacagagg 300
aaaacattta gtgcagtctg tattatcctt ttccaacttt tctgtttgtg caagtttttg 360
aagattcatt ggccaaacaa tgaacaacaa aggttttctg agagaagaca aggtggactt 420
ttcattttgt tagtaaatac cagtggcact gttgaacgaa acaaatactt ttatctcagt 480
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cctcttcttt atattctgcc acatcgacct ctaaaccgga attgtccttc agtttgccgt 660
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gtcnaactgg gcanacagag tctggatt 748

<210> 664
<211> 785
<212> DNA
<213> Homo sapiens

<400> 664
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ggtcaagctg gccctggatg tggagatcgc cacctnccgc aagctgctgt agggcnagga 120
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gcagntactc ctatggcant ngncttgncn ttggatgcng cnntagtncc agcagcggna 300
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cccacagctt tcaggcccct ctctggcagc atagccctct cctnangttg cttgtcctnc 480
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cattaaattc ttgaggaang aaaatgacct attatccccc ataaagaacc tgaaacttca 720
agnctaangt cccagcntnc aacanggaag gagntccntt tttttnattn gctaaaccan 780
tcctc 785

<210> 665
<211> 763
<212> DNA
<213> Homo sapiens

<400> 665
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atcgattcgc tgaaccctaa aggaaagcca gcaaaccagc tgcttgctct caggactttt 120
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gtaagtgaat gctgtagatt tatcctaaat ttgctgtagc agtggggaag agggacggat 540
ntttttaatt gattagtgtt tttttcctca catttgacat gactgataac agataattaa 600
aaaaagagaa tacngtggat taaagtaaaa attttacatc ttgtaaagtg gtggggaggg 660
gaaacagaaa taaaattttt gcactgctna aannnaaann actttccagc naanctaaaa 720
aactnnancc tttaaactat antgagttcg nanaccnggn ccn 763

<210> 666
<211> 759
<212> DNA
<213> Homo sapiens

<400> 666
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cagctgaatc tttatcaggt attgnaaaga tacacatatg atatgnttat taaaattgaa 600
ataatgtaaa acacatgaat aaatttgcaa aaccaagatc acagtccacc atatgcactc 660
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aaaaaaaaan aaaaaactcg agcctntana acttttgng 759

<210> 667
<211> 760
<212> DNA

<213> Homo sapiens

<400> 667

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cggactattt gtaagtcntg tncagaacat gatcaaaggg tgttacactg ggctttccgt 720
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<210> 668
<211> 763
<212> DNA
<213> Homo sapiens

<400> 668

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<210> 669
<211> 754
<212> DNA
<213> Homo sapiens

<400> 669

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taaactctga atcttctcat ctgttnaaat gtgnattaaa gtatctacct aactgagtng 660
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<210> 670
<211> 752
<212> DNA
<213> Homo sapiens

<400> 670
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<210> 671
<211> 752
<212> DNA
<213> Homo sapiens

<400> 671
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tggtcttatg actagtagat aaattcattg ccataatgag gctagctccc agataaacag 600
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<210> 672
<211> 792
<212> DNA
<213> Homo sapiens

<400> 672
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cancccttc cccttggccc cnnttgacca cttcatggag tttaattaaa atngcccttg 720
gtangaaaan anaatantnt tcctcntttt antgntnttt tnntataatt tnatnatcct 780
antnatcntn nt 792

<210> 673
<211> 755
<212> DNA
<213> Homo sapiens

<400> 673
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ttccaggagt atgtcacctt cctgggggcc ttggctttga tctacaatga agccctcaag 240
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agtggtgggt aattgtacaa taaatttttt ttggtcaaat ttaaaaaaaa aaaaaaaaaa 360
ctcgagcctc tagaactata gtgagtcgta ttacgtagat ccagacatga taagatacat 420
tgatgagttt ggacaaacca caactagaat gcagtgaaaa aaatgcttta tttgtgaaat 480
ttgtgatgct attgctttat ttgtaaccat tataagctgc aataaacaag ttaacaacaa 540
caattgcatt cattttatgt ttcaggttca gggggaggtg tgggaagttt tttaattcgc 600
ggccccggnn gccaatgcat tgggccccgg tacccaactt ttgttccctt tantgagggt 660
taattgcncc ccttggccgt aatcatggta atagctgttt cctggtgnga aattgtttcc 720
cgtnacaatt ncacacactt ttcancccgg ggacn 755

<210> 674
<211> 753
<212> DNA
<213> Homo sapiens

<400> 674
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tagctgctat catgacccct ttttaaggca attctaatct ttcataacta catctcaatt 180
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gggtatcagc tatttttttt taaattcaaa aagaatatcc cttttatagt ttgtgccttc 360
tgtgagcaaa acttttttagt acgcgtatat atccctctag taatcacaac attttaggat 420
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aacaaactca aaatggattc ttaggagcat tttaatgttt attaaataac tgaccatttg 600
ctgtanaaag atnanaaaac ttaagctttg ttttactaca acttgtacaa agttgtatga 660
cagggcatat tctttgcttn caanattttg ggttgggggc actangggtt caaaaccctg 720
gcanaattgt cnactttagn ctgaccataa tnc 753

<210> 675
<211> 760
<212> DNA
<213> Homo sapiens

<400> 675
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agctccttgg gcaagctctt tatcctaaga ttcctcagtg agccttatag agttgctgcg 180
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ccatatatgt ttgnncgcta gattgntncc ancaattngc ntcttggaat tgttgaattn 720
ggccctgtgt gtgtgcctgt ggtaantgga nntgngtttc 760

<210> 676
<211> 751
<212> DNA
<213> Homo sapiens

<400> 676
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gaacctttte ccctctactc ttgtctaaaa gttctgtgtg gcacacagag atgcgaccta 120
ctcaatctga cttagtaaaa ccatgctgta gaatttttgt cttaaaaaga ccacataccc 180
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ttcatactca taaatagcac taaagtgtta taacattttc atttacctat ttttagttcc 300
ttcattttaa cttaataaaa atcttggatt gatattcttt ttttttttt ttgggacgga 360
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gcctnccggg ttcacgccat tctcctgcct cggcctgccg agtagctggg actgcaggcg 480
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tggaattnca ggcgtgagcc accgcgcccg ggnctaaatt ggatattctt taaccattaa 660
aaggtttact gggtgnccna tttgccatat tattggaaac ttggaaaggg taatttgaaa 720
caaagntttg aagttaactg aaatttgggg a 751

<210> 677
<211> 756
<212> DNA
<213> Homo sapiens

<400> 677

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ggataaactc ttcagtgacg aatattagaa ttagttagtt atacatttga ggaaaactat 120
aaaagtacca ataatgagta ggaaatcact tctgcagtat ttttggagca ttttccttaa 180
gcatgacata aaagccaaag gtcacaaggg aaaaaactga tagatttgtc tgtgatattg 240
agagatgtat gcacatatac atacaacagt catagtaaga caccgttaga caaaaggtga 300
tgtatgaaaa agaggcaaaa caacaagaag aaaagattga aaaaatgaga gctgaagacg 360
gtgaaaatta tgacattaaa aagcaggcag agatcctaca agaatccagg atgatgatcc 420
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agtttagaag cctgaaactt ttctcgtatg gggtggtttt tgcattaaat nctggggtcc 600
attttacaat ccattatttt tgaccactgc tatgtgttca agtagtatga gaatgtgatt 660
gntnttatct ggntcatata tatttctttg gctaatttaa tatgtcaaat aaatgagttc 720
atttaaaaaa aaaaaaaaaa acccggactg ttttnt 756

<210> 678
<211> 756
<212> DNA
<213> Homo sapiens

<400> 678
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aattcggcac gaggggtgtt ggagcagatt gtagttgatc cacagcaaag agcatcacca 120
aagccattcc aggaggaact agatccacca cttcctctgc tgggcatgct ccaaaaatgg 180
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cccaaaagcc ctgagtttct gaaaaaatat tgaaagtttc tatggtgaaa taggaagtta 300
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atattgaggc aagctgtacc agcagcttct gggggacctg ctcantggat ggtcccaacc 660
cctgcattta tctctttggg atagtttaag cccctgnacc tggaactgng tatttttctg 720
tactatctct gtancattaa tttttttact ttttgg 756

<210> 679
<211> 747
<212> DNA
<213> Homo sapiens

<400> 679
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aagttggatt attgggcatg tgtggcagcc tgccctgcta catgctagac aagtgtgctt 480
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ttgtaaaact tagataatag agcctancaa gttactttgn atctaattgg atacatttta 660

tgnttaattt taccaccata cattttatta atcaaaattg gttagcatgt gactcttttt 720
ggcttcanaa gttntcaaaa aaattat 747

<210> 680
<211> 750
<212> DNA
<213> Homo sapiens

<400> 680
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accggctggg cctacaaaaa gatcgagctg gaggatctca ggtttcctct ggtctgtggg 120
gagggcaaaa aggctcgggt gatggccacc attggggtga cccgaggctt gggagaccac 180
agccttaagg tctgcagttc caccctgccc atcaagccct ttctctcctg cttccctgag 240
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acagatggcc tgtgggatgt cactactgac tgtgaggtag ctgccactgt ggacagggtg 360
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cctgggggcc cggggtaccc cccgagaccg tggctggcgt ntccccaaca acaagctggg 480
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attcttgaaa gttgtctccc ttgacccttc tttaatggca acttaactga anaaagggat 660
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attntntctt aananaaana actccggcct 750

<210> 681
<211> 748
<212> DNA
<213> Homo sapiens

<400> 681
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gctgctcagg aggctgaggc aggagaattg cttgaaccca agaggcggag gttgtggtga 120
gccgagattg caccttttgta ctccagcctg ggcaacgagc aaaaaactct gtctcaaaaa 180
aaaaaaaaaa aaagaaaaag aaaaatggct tccaggacag agcatgctca tttgctggcg 240
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taaatttata acttttgaa acaaaataat gtgtaatttt ccatttgggg gcaaactcta 360
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ccagntgaca naaaaatccn agnatgagat caanaaggat actggtgttt tctgactttt 600
acaaaaatta ctttgntgtt ttcattaaaa aaaaagcttt aacctantgn ttncntantc 660
cttttagaaa ntattaaatt tnaaaatgaa ttcnatanaa atanaannac naaaaaactt 720
nntnccttta naactttagt gangcgtn 748

<210> 682
<211> 755
<212> DNA
<213> Homo sapiens

<400> 682
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agcaatcaat tcctgtcgaa gtgaatacca tgcagctttt aacagtatga tgatggaacg 120

catgaccaca gatatcaatg cactgaagcg gcagtactct cgaattaaaa agaagcaaca 180
gcagcaggtt catcaggtgt acatcagggc agacaaaggg ccagtgacca gcattctccc 240
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gtccaggagg accnncnaag ggcagtttcc ggagcccgnt gttccggaga tgctgatgtg 660
ggntgtgtct gcanttcang gccaaanttg gggacccctg ggaactgtac cctangggnt 720
ncttgnagnt taaaacttga ccttaanggn ngcct 755

<210> 683
<211> 755
<212> DNA
<213> Homo sapiens

<400> 683
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tcggcacgag aattagtatc aacttacaat ccaagtccaa gtatcatctt ataatcactt 120
ttttctacta tattaagatc taatgaattt gatttctttt ttgaagtttt ttcttgtaac 180
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tctcgcatat tatattatag caggccaaga taaaattttg acagctcttt aagcccacat 420
gcagcagtgg gtcagataac cctgtggcag tgacacgggc aaattggcat ttgaataaag 480
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gactcagggg aaagtactaa accaaaaact ctgattntac tttgcgtttt ctggaagtnn 660
ttggtttact gagatgcttt tgtaaaggaa aataatgctt gngacanttt agtaatttct 720
acanaattcn ttaatatttc ttcctcntgg gcttn 755

<210> 684
<211> 774
<212> DNA
<213> Homo sapiens

<400> 684
ggntttnann ctttnnaatn cctttgctnc tcgntctttn tgctggatcc catcgattcg 60
caagatctgg aggaatgcag agaggaactt gatacagatg aatatgaaga aaccaaaaag 120
gaaactctgg agcaactaag tgaatttaat gattcactaa agaaaattat gtctggaaat 180
atgactttgg tagatgaact aagtggaatg cagctggcta ttcaggcagc tatcagccag 240
gcctttaaaa ccccagaggt catcagattg tttgcaaaga aacaaccagg tcagcttcgg 300
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gatgatgagg ccttcttgtc agcaaatgca ggtgctatac tcagccagtt tgagaaagtc 480
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gtgtctttct tctggggttt cagtatttgc aaagaaantg aagaagaatt ctggaaatgc 660
cattcaatta accctnagga aaaaagccga ccttanaaat ttaccttant gcnttgnnnn 720
ttaaaaanaa aaaaaantna aaaaactttn acccctttana ccttttgtgg ggnc 774

<210> 685
<211> 759
<212> DNA
<213> Homo sapiens

<400> 685
ggntttnnan nctttctaat ncttggcttn agttcttttg caggatccca tcgattcgaa 60
ttcggcacga gagtacccag agttgcgagg agtttttaa ctgatttagc cnnntggcaa 120
tcatgagtga atggatgaag aaaggcccct tagaatggca agattacatt tacaaagagg 180
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ggaaggacat cttacagctt ccaatgagaa gccaagaagt tgtgaacata ctgattgaaa 660
aaagacttta ttttaatccc tcattaaaan ggttttaaat gttaaaaaaa aaaaaaaaaa 720
acttcgagct tttaaactat ngtgagtcga ttcntataa 759

<210> 686
<211> 749
<212> DNA
<213> Homo sapiens

<400> 686
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gaattcggca cgagggcaat tagcctcgct taagttgcct tttttacaca ccaaaacttt 120
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acagtgacct tctccatggg tcaaggactt ccttacaatt tctnctgagt taacttttgt 660
gaaaataatc ctaaggtttt ctggcttatt gaggaaattn ctacaaacaa caaaccaaca 720
acngaagaga agatcatcaa ccactgttt 749

<210> 687
<211> 760
<212> DNA
<213> Homo sapiens

<400> 687
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gaattcggca cgaggaaatg tgtatttcag tgacaatttc gtggtctttt tagaggtata 120
ttccaaaatt tccttgtatt tttaggttat gcaactaata aaaactacct tacattaatt 180
aattacagtt ttctacacat ggtaatacag gatatgctac tgatttagga agtttttaag 240
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ctactcanga aaaagcatct tcttggatat gtcttaaaat gtatttctgt cctctataca 660
naaaagttct taaattgatt tttacagtct ggaatgcttg gatgntttaa aatantaaca 720
ttttatattt tttaaaagac aaancttata ttnatcctng 760

<210> 688
<211> 752
<212> DNA
<213> Homo sapiens

<400> 688
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aattcggcac gagacaaaac ctacagatgg agataaaaat tactactgtt attcaacatg 120
tgttccagaa ccttattttg gggagtaaag tcaattgggc agaggatcct gcccttaagg 180
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caccgtaatt ttagaaaagc atatccataa cgtttacagt tgtagtacag ttgtggttag 360
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aagtagaaac cgggtttcac ccgtgttgcc caagctgctc tnaaaactcc tgagctcaag 660
cagtccaccc gncttngcta ccggantgct aggattcaga cgtaagcccc cgaancctgg 720
ctagtttgcn ttnttttctn tcattttata ag 752

<210> 689
<211> 806
<212> DNA
<213> Homo sapiens

<400> 689
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cgaattcggc acgaggannt ctntgctatn gaacagnggc tggtnnacac tnnggantta 120
nnnntgnacn ntannnattg nancanntan tactggnnnt ccntaatncn nttaatgtna 180
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gaaaggaatt ttncatagtg ggctcaatga anggggtacc cttggncttt ntaaaaaacg 720
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<210> 690

<211> 772
<212> DNA
<213> Homo sapiens

<400> 690
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gcaccctgcc tgccgggtcc ttgtgcaccg tccacacggg cctgagtttg gacgccgacc 600
cctacgaccc tggagaggag gacccagccc aagacccggg cctttggaaa acttccctgt 660
gggaagcttt aagnnccttc nanangccac ttacccaacc ttgaggggnt ccaaangccc 720
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<210> 691
<211> 755
<212> DNA
<213> Homo sapiens

<400> 691
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acaagtcttg ctttgttgcc caggctggag tgcaatggca tgatcttggc tcactgcaac 240
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cttncantga actgtgattg tttccantac agnccacctg ggtgacanag taaanaaaan 660
gaaacattac ataatttggc tagagcataa taaattgatt tctgggttnt gaaattnnag 720
ttgccataaa aggnntttna atgngcnant tcant 755

<210> 692
<211> 748
<212> DNA
<213> Homo sapiens

<400> 692
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tcggcacgag gtccgaagaa aaagactgtg gtggcggaga tgctctctcc aatggcatca 120
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atgagcctct gagcttccta cagcgcctaa ctgaatacat ggagcatact tacctcatcc 300
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gctctatcta tcccaaactg aaattctggg ggaagagtgt agaacagaac ccaaaggaac 600
catcaccttg gagctncttg aacacaatga ggcatataca tggacaaatc cacctgctgt 660
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accncagact ggggacaaat ntgtgttg 748

<210> 693
<211> 881
<212> DNA
<213> Homo sapiens

<400> 693
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cgtgctgacc atctggcagt gntcttcgta ttctctggcc tgtggggcgt ggcaagatgc 180
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cngngaggcc naangaggan naantnataa aagcaccagc cagaagaatt ttcttanaan 540
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tagnaattca aangntgtgt nnttacnaat ntntaanggg ttattcaaan ttcnaaattt 780
taaanattnt tatgcantnc ncacaatnta tataanangg tcctnaaaac gngnnccaat 840
atnncannnc nataatntag nanatntntn nnccntgtan n 881

<210> 694
<211> 742
<212> DNA
<213> Homo sapiens

<400> 694
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aaatgactta tcagtgttca tcatctgaaa gctaagtggt tcgttcaatc acttttttcaa 120
agttgatagt agattgcatg gtttcatgtt tcctcatatt ggtttattaa ttctatttaa 180
tcaaggaaaa taacttcaga ttccataaag tttcagttta tttttagttt actactaggt 240
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tggaaactcc tcaaangagg ganaaagtna ttttttttcca gacatttttc ctcaattctg 660
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gtgaaatgtt cacaatntcn ng 742

<210> 695

<211> 745
<212> DNA
<213> Homo sapiens

<400> 695
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gaggctagac gaagtggtga agcccaaaga cttatttttg agctcgctgt aagactgaga 120
aatcacgtag tccttcctga aaccactaag aggaaaaatg tctgtgacac tgcatacaga 180
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cttaatgatg tacacattaa gggccntaac tattcatgcc aacccatttg ctcagtagct 660
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taccccgntt ttaattatgt canaa 745

<210> 696
<211> 795
<212> DNA
<213> Homo sapiens

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ggtccaaggg tccccttttt tccccccccaa naacaaagaa aaggttgggc ccgaaanggt 780
cccaaccttn ttnnt 795

<210> 697
<211> 734
<212> DNA
<213> Homo sapiens

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cccctgtcaa gtcacttacc atgcaaacca caggctctaa gagtttgtcc ccagggacat 120
ccatccaagt catctccatg gctcctgggt cccctggtga gcatggagtc aggaggtcat 180
caatcatcat gctggggttg gtgcgagagg ggccacagac ctgaaaccaa atggatctga 240
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ccttgatgtc ttcctcatta acactgtcac gtctcaccag gaatacagtg acattaaaag 480
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gttttccaat ttttggttct tatttttctn ttgcaatctg catttaagna antgccnttn 720
ggtctctaac antn 734

<210> 698
<211> 728
<212> DNA
<213> Homo sapiens

<400> 698
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ggtttaattt aaacctctca tctttttta agcactcact gantttgacc gagacagcca 120
gtcgccgttg aggaatcctc tgttgtcaac atcgagaccc ctggttttcg ggaaacccaa 180
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tcaatcagtn caatctcaaa cttttgaaat gaccncaatc caatctggac ntaagctgag 720
tacttgtn 728

<210> 699
<211> 746
<212> DNA
<213> Homo sapiens

<400> 699
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cttcctgtct tcagaatgta aaagggtggg ggaattattg tctctggtta aatntgcacn 660
cccttgactt gtgggggttt tggggcatgt tcanntattt angaatgaat tncaattnga 720
caaaaggggg tttantnaat tgttnt 746

<210> 700
<211> 759

<212> DNA
<213> Homo sapiens

<400> 700
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gattcgaatt cggcacgaga taagggtggg gccttaattc agtagaattg gtggcctcct 120
aagcagagga agagagattt ttctttctct ctctgccatg tgaagacagt gaggagtcgg 180
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<210> 701
<211> 751
<212> DNA
<213> Homo sapiens

<400> 701
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<210> 702
<211> 748
<212> DNA
<213> Homo sapiens

<400> 702
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gtcatcaaga aacgaagtac agatccngtc ggataagagt taanggcaag gagggtaatg 660
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ttatgttaaa aaatgtccat ttactgng 748

<210> 703
<211> 769
<212> DNA
<213> Homo sapiens

<400> 703
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ggatcccatc gattcgctca gctgaggcaa ttaaactgga aaagaaatag attgaaaaga 120
tactacagaa gaagcagtac agaagttggg ggactgaagg agagggagcc actgcaggtg 180
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<210> 704
<211> 759
<212> DNA
<213> Homo sapiens

<400> 704
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<210> 705
<211> 777
<212> DNA
<213> Homo sapiens

<400> 705

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<210> 706
<211> 760
<212> DNA
<213> Homo sapiens

<400> 706

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<210> 707
<211> 856
<212> DNA
<213> Homo sapiens

<400> 707

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ataanancan tannaantta tatttcnnan atantanann nancnnttta naannantta 660
nggnnancan nnattantnn tnnatanntt acattaaant tattnanann anaaannnan 720
nananannat atattannan anantnacnt aaactnnnnt naatnntcca nanacttnaa 780
naanaataag nnntanatna nnnnttangn ntnatatann ttnanatann nnnnacnata 840
nnacatnnnn tannga 856

<210> 708
<211> 766
<212> DNA
<213> Homo sapiens

<400> 708
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tatgaagtag gtattattat catccccatt ttacaggtga agaaactgag tctctgagag 240
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tnctacactt gtaggggcaa aaccccggtt tgactctttc cgggttccta cccttaacca 720
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<210> 709
<211> 743
<212> DNA
<213> Homo sapiens

<400> 709
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tcccttggcg tccgaatcgt tccaccatca atggcctgcc agcgtctttc gatgtgttct 300
tctgccagtg tgttcctctt gacgtccagc cgcttgtgtg tgtgcccgct ggggtctcag 360
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gggaagatgc aatcctcttt atgacaagtt tctaanaagt tgataagaaa aatggggacc 660
tgcctaaggg ctagtatctc atttaatact ctatagaata ttatgnggtt ttccctttta 720
ngttttaaat gttgaananc nan 743

<210> 710
<211> 753
<212> DNA
<213> Homo sapiens

<400> 710

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aatattttat attgacttaa ggaaaacctt tcattgggaa ttaattaaat taagtctcta 660
atatcctgga agacagtaaa aantnaagcn ggtgntctca antttgaacc cggcnattng 720
naatttcatt ataggaattt ctgaaaataa tcc 753

<210> 711
<211> 718
<212> DNA
<213> Homo sapiens

<400> 711

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ttgcattact tttcattggg attgaactga gaaataacaa acaagcttta agtgggaaat 180
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gaaagagagt gacaaaggag gagaaggaat agtatttctt ttttagtatt gntttgaaat 600
taaaactctg ntattttaat atggtaaaga gcaagaattt gggttgggcc gcngtgactc 660
acgcctataa tcccagcact ttgggaagcc ntggtgggca aatcacctga aattangg 718

<210> 712
<211> 783
<212> DNA
<213> Homo sapiens

<400> 712

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ngcacctgng cnganaacaa gaacnngcga nnccaanact tttnagacat tattgcctta 660

agtngaaaaa cccagngcac caacgggaaa ccngaccgnc ntgnanccct gnttaacntt 720
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cct 783

<210> 713
<211> 765
<212> DNA
<213> Homo sapiens

<400> 713
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ggccccttgt tcaggaaacc acactggggg ancttntttt ttttn 765

<210> 714
<211> 740
<212> DNA
<213> Homo sapiens

<400> 714
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tgatgatagc caacctgata aaaaagctgt tcttcccact agtaaaagca gccaaatgat 180
caccttcacc tttgctaatg gaggcgtggc caccatgcgc accagtggga cagagcccaa 240
aatcaagtac tatgcagagc tgtgtgcccc acctgggaac agtgatcctg agcagctgaa 300
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caatctgcag ccaaaagcag actaaaatag tccagccttg ggtatacttg catttaccta 420
caattaagct gggtttaact tgttaagcaa tatttttaag ggccaaatga ttcaaaacat 480
cacaggtatt tatgtgtttt acaaagacct acattcctca ttgtttcatg tttgaccttt 540
aaggtgaaaa aagaaaatgg ccaaacccaa caaactaaca ttcctactaa aaagttgagc 600
ttggacatat tttgaatttt tgtaagtgaa agatttttaa actgactaac ttaaaaaaat 660
agattgtaat tgatgtgcct taatttgcat aaatcataaa tgtatgtcct ctctgtaatt 720
ggtttaatgt gtgcttgaan 740

<210> 715
<211> 708
<212> DNA
<213> Homo sapiens

<400> 715
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gagggaggct agactcaagc tgtctggaga gtgtgaaaca aaagtgtgtg aagagttgta 120
actgtgtgac tgagcttgat ggccaagttg aaaatcttca tttggatctg tgctgccttg 180
ctggtaacca ggaagacctt agtaaggact ctctaggtcc taccaaatca agcaaaattg 240
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gaaagacatt gccaagcccg gtcaccatca cgcccagctc catgaggaaa atctgcacat 540
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tctaatctga tgagttactg agctttggtc ccttaaaaca agctgacttg gtccctaaac 660
cagatgaaaa tccagatgct ctatacttgg ctttaagaac tgctttcn 708

<210> 716
<211> 730
<212> DNA
<213> Homo sapiens

<400> 716
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taaaaaagag acccttttta tgagactcac aataggataa aagagcccat gcctattttt 660
aaacattttt ttcactatat aagacatgca tgcctgnaaa atggttttta attagtatna 720
ntgcttaatn 730

<210> 717
<211> 728
<212> DNA
<213> Homo sapiens

<400> 717
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acataggata agtaatgggt ggacagaagc gggaaaggag aagggcaggg cacatgttta 180
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cctggaaaat tttatttcac cagcactaca acttctcaac agcaccaacc aatttaacta 600
tggatttttg tactaanccc agttgcctct ttnaaaacaa cttgtcaact ttgtctaatc 660
accctcagct ttttttaaa aacccctnct ctacccctnt ctcttcagaa caccaaagtg 720
gnctttn 728

<210> 718
<211> 730
<212> DNA
<213> Homo sapiens

<400> 718
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aattcggcac gatctagata ttgcccaatc gctgcccaca gtgcacatac ctttccacca 120
gtcacatgtg agagggcaga ttttccaaat gctcatcacc acttggcact gtgtggacta 180
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ngctggtacg 730

<210> 719
<211> 733
<212> DNA
<213> Homo sapiens

<400> 719
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tcatcagtgt ttgcttcaga gtttgaggaa gatgttggat tgttaaataa agcagctcca 180
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aagtgggaca gcaattcgct ttcnaggaag ttttgaatga ctactattaa agagaangcc 720
caanaattnt ntt 733

<210> 720
<211> 740
<212> DNA
<213> Homo sapiens

<400> 720
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tcgaattcgg cacgagaaga gaaggaccta gagattgaga ggcttaagac gaagcaaaaa 120
gaactggagg ccaagatgtt ggcccagaag gctgaggaaa aggagaacca ttgtcccaca 180
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cgntaaaaaa aaaaaaaaat 740

<210> 721
<211> 736
<212> DNA
<213> Homo sapiens

<400> 721
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atgagtgata ttttggtctg ggtttcctct taagatttta gtttgtctga attaaggaaa 120
aatgttttta atatacattc ttattttgtc ccacccctcc agaaataagc tggaaatctt 180
aacttttgg ggggtctttt ttggtgtttt aatgggccca gaactgtggt ttaaattttt 240
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gaataaggaa caaacactat tgctgccgaa tgccataaca ctgagttgtc aaattgtgat 600
tgaggaaatg aaaaggttta tacttttttaa aaaaaaaaaa cnnaanccaa aaaaccaaaa 660
cttcaaatgg aataaattat tcatgaagcc cttaaaaaaa aaaaaaaaaa aactcgaacc 720
tntaaaactn tngngg 736

<210> 722
<211> 751
<212> DNA
<213> Homo sapiens

<400> 722
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aattcggcac gagattatag agattaatct cctttgctcg aagtctattt aaatattagt 120
cacatctaaa acatactttt acagcaacat ctagactggt gtttgaccaa acaactgggc 180
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gcatcatgtt tgtatttgat ccanctagat gacatgtaag agaaaacttt attgnggact 660
ctgtaaagtg tgacattcgt ttgtgactca atttgctcat gtatttggtc ctggggagtc 720
attacatagc taactttcag ctgctttcaa t 751

<210> 723
<211> 749

<212> DNA
<213> Homo sapiens

<400> 723
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tgctagccaa agcctgctgc cagctccata gcctggacct acagcactcc atggtggagt 120
ccacagctgt ggtgagcttc ttggaggagg cagggtcccg aatgcgcaag ttgtggctga 180
cctacagctc ccagacgaca gccatcctgg gcgcactgct gggcagctgc tgcccccagc 240
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gcttcctagc ctagaggagc tctgcctgnc gagctcaacc tgcaactttg tgagcaacga 480
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tctgggcctg tatggcacgt cagaccggct gacttttacc aangagggca agnccctttt 660
gaccagaant ggtgcataca ctgcgaagaa ctggactttg aatggccaag ggttcaattg 720
agaaagacct ggaacangcc cttgctnct 749

<210> 724
<211> 761
<212> DNA
<213> Homo sapiens

<400> 724
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agaaattgta actaaagata gattgtttaa agcaaagcaa gaaacttctg aagaaatgga 180
acaaagtgga gaagcctcag gaaagcccaa cagagagtgt gcaccccaga ttccttgtag 240
tactcctatt gctactgaaa ggacagttgc acatttgaac actctgaagg accgtcaccc 300
aggtgatttg tgggcccgca tgcacatctc atccctggaa tatgctgcan gagacattac 360
ccgaaaaggg agaaaaaaag acaaagctcg agtgagtgaa ctgctccaag gcctctcatt 420
ctctggtgac tcagatgtgg aaaaagataa tgagcctgag atccagcctg ctcaaaagaa 480
gttaaaggta tcatgtttcc cagaaaagag ttggaccaaa agagacatta aacccaattt 540
tccaagctgg tcagcactgg attctggact tttgaatctc aagagcgaaa agtttgaacc 600
cagtagagct ttttgaatta ttttttgatg atgaaacatt caacttaatt gtcaatgaaa 660
ccnataatta tgcttctcag aaaaatgtca gctttggaag tccagttcag gaaaaaaaan 720
nnnnannaaa aaactcgagc ctntanaact atngtgagtc c 761

<210> 725
<211> 760
<212> DNA
<213> Homo sapiens

<400> 725
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catcgattcg aattcggcac gaggcggact ctcaggacga aaagagtcaa acctttttgg 120
gaanttcaga ggaagtaact ggaaagcaag aagatcatgg tataaaggag aaaggggtcc 180
cagtcagcgg gcaggaggcg aaagagccag agagttggga tgggggcagg ctgggggcag 240
tgggaagagc gaggagcagg gaagaggaga atgagcatca tgggccttca atgcccgctc 300
tgatagcccc tgaggactct cctcactgtg acctgtttcc aggtgcctca tatctcgtga 360
ctcagattcc cgggactcag acagagtcca gggctgagga actgtccccc gcagctctgt 420

ctcccttgct agagcccatc agatgctctc accagcccat ttctctactg ggctcctttt 480
tgactgagga gtcacctgac aaggaaaaac ttctatcagt actttgatat gtcacagttt 540
catgtttatc cagttcaatg tatttttaaa ttttccttg agacttcttt gactgataga 600
ttattgtgaa gtgtgttttt aaatttncaa atgtttangg attttcatat ctttcttatg 660
ctgatttcca attggattcc ttacaatgat ttttgggttt catctgctct tggatgatta 720
ctatctcttt taaatttggt gtggccaagt tttagggccn 760

<210> 726
<211> 741
<212> DNA
<213> Homo sapiens

<400> 726
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ggcacgagac aagttctatt gagtgctatt cagaatagga acaaggttct aatagaaaaa 120
gatggcaatt tgaagtagct ataaaattag actaatctac attgcttttc tcctgcagag 180
tctaatacct tttatgcttt gataattagc agtttgtcta cttggtcact aggaatgaaa 240
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tgtgcatttg aaaaatgctt ttcgcgatct tcctgctggg attacaggca tgagccactg 360
tgcctgacct cccatatgta aaagtgtcta aaggtttttt ttggttataa aaggaaaatt 420
tttgcttaag tttgaaggat aggtaaaatt aaaggacatg ctttctgttt gtgtgatggt 480
ttttaaaatt tttttttaag atggagttct tgttgcccag gctagaatgc aatggcaaaa 540
tctcactgca atctcctcct catgggttca agcaattctc ctacttcagc ctcccaagta 600
gctgggatta caggcatgtg ctaatttggt gtttttaata gagatgaggg ttttccatgt 660
tggtcangct ggtctcaaac tcctgcctta ngtgatcgcc tcggcctnct aaagtgctgg 720
aattcaggca tgaancncca t 741

<210> 727
<211> 751
<212> DNA
<213> Homo sapiens

<400> 727
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taaaaattgg gtaaagggac atttgcttac ctgnntnatg aatcactntt tgaaatgtga 120
tcttgccata tcatcaagaa acttgttttc tggatgaata ctgggagaat aaaatgagaa 180
ctctggagtg agctaaattg atcccaatna agtttttctg cttagcagac agaaggtata 240
attntttgac acccttccc acctggtgcc tatgctaggc ttgtcctgan aacatncctc 300
agtaacttga tattcacatg acctacagga tgtcccatct gcagggctga gtcagttggg 360
gaacaccaga ggctacacag tagctattcc tgctactcgg ttaatgagct tggcaggttc 420
tttgtctcac tgaattctta tcatggaaac agcagcagca gccgctagga aatcttcaag 480
tgtagnggcc tgtgctaacc cagtggtaaa tcccttagat cccctgctgg tctctggcaa 540
aactccttga tnttgggtac catgtatant ttgcctttga cntttaacgc tttctacgat 600
anggtaanca cncntttaat ttangcnctg gancattaac tttctttgca aaggctactt 660
atngccngnc acaantgcag cctcggacan ancnnangnn atatcctgtt ggccatggct 720
ntgatgtttg acanccgata ngccttctnc g 751

<210> 728
<211> 765
<212> DNA
<213> Homo sapiens

<400> 728
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cctgcagatt gcagagcggc gagagcccat aggcagcatg tcatccatgg aagtgaacgt 120
ggacatgctg gagcagatgg acctgatgga catatcggac cangaggccc tggacgtctt 180
cctgaactct ggaggagaag agaacactgt gctgtccccc gccttagggc ctgaatccag 240
tacctgtcac aatganatta ccctccaggt tccaaatncc tcagaattaa gagccaancc 300
nccttcttnt tcctncacct gcaccgactn ggncacccng nacatcanng agggtgggga 360
gtnccncnnt gttcagtccg atgaggagga anttcangtg gacactgncc tgnccacatn 420
acacactnac agagangcca ctcnngatgg tgntnangac agcaactntt aaattgggac 480
atgggcgtng tntggccaca ctggaatcca nntttggctg tatgcggaat ttcacctgcn 540
aagccaggtt nnttnataga cgttcttgat tattacataa ttgccaatca tgtggtgagn 600
aacttgtgng aacantttaa caattaantg tgaagaccgt acaangaatt agttaaangc 660
natnnagggc taaacaagct attacttntg annnaantta angnatntaa nntttnctgn 720
ttctnaaaat nttcaatntn nngggaacan ttgtaanttt nncnt 765

<210> 729
<211> 743
<212> DNA
<213> Homo sapiens

<400> 729
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acgaggagat ctctgggatg tcagtgaggc tggttgaaga ccagaggtaa actgcagagg 120
tcaccacccc caccatgtcc caggtgatgt ccagcccact gctggcagga ggccatgctg 180
tcagcttggc gccttgtgat gagcccagga ggaccctgca cccagcaccc agccccagcc 240
tgccacccca gtgttcttac tacaccacgg aaggctgggg agcccaggcc ctgatggccc 300
ccgtgccctg catggggccc cctggccgac tccagcaagc cccacaggtg gaggccaaag 360
ccacctgctt cctgccgtcc cctggtgaga aggccttggg gaccccagag gaccttgact 420
cctacattga cttctcactg gagagcctca atcagatgat cctggaactg gaccccacct 480
tccaactgct tcccccangg actgggggct cccangctga nctggcccag agcaccatgt 540
caatgagaaa gaaggaggaa tctgaacctt gggtaaggat ttggggcaca gtaccaggaa 600
gggggcttgg tgccagacct tatgaggaag aaggattttc ctatgtacag agaangggac 660
cctgtnctgt tgggaagtgc ttgtgcaaac ctaaccaagt tactaacccc tctgntttct 720
gtgctacaca aaggggataa att 743

<210> 730
<211> 744
<212> DNA
<213> Homo sapiens

<400> 730
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gcacgagggg tcctccaaga gtttggggcg cggacnnnag taccttgcgt gcagttatgt 120
cggcgtntgt agtgtntgtc atttcgcggt tcttacaaca gtacttgagc tccactccgc 180
agcgtctgaa gttgctggac gcgtacctgc tgtatatact gctgaccggg gcgctgcagc 240
acggttactg tctcctcgtg gggaccttcc ccttcaactn ttttctctng ggcttnatct 300
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aaagcngatt tccaaggcnt ctgcccagag cnagcctttg ntgannttct ctttgccagc 420
accatcctgc accttgttgt natnancnta ggtgnctgaa tcattctcan ttncntaatt 480
gangagtang anactaaaag aatgttgact ctttgaatct gctggataag agactngaga 540
tggcagctta ttggacacat ggattttctt cngatntgca cttactgcta gctntgctan 600

ctatgcagga gaaaagccca tagttactgc gtgtnacaac aactntctaa cnaacattca 660
ttaatccann ngannccttt caangaatgg taancctatg ccnttcaana tactgaactt 720
nntgccactt ntggcaaaaa aaat 744

<210> 731
<211> 746
<212> DNA
<213> Homo sapiens

<400> 731
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ttcggcacga gtgtccttat ctgaaattca gcgatcttnt tgaataagca tttctctgat 120
tgtggtatat gcctttaatt ttatttctag agtgacaaat ttttggtttt gacagttttt 180
ttctagcttt atagtttctt cttggggaga gaatatgtca acctcactcc atcatgctga 240
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ctgataagta attgcagtat ctggtttcta tggttggatg attcaggatt ccaggaataa 360
tagttacttt ttagacctct aaagaagaag taacaaccac gtaaatgaaa agatgcttct 420
taaatcatgg agaatcaggg cttagtatca ctgtattttc aaactgtttc agccttactt 480
tataactgat ttagtatatt tttcttttaa tttcagactt cagtgaagtt ccttatgact 540
tcccctgaaa ttgcttcctt atcatggggg caaatgaaag taaaaggctc taatacaacc 600
tataaggact gcaaagtatg gccagggggt agtcngactt gggattggag agaaacagga 660
actgagcatt ctcctggtgt gcacctgcag atgtgaagga agttgttgag aanggtgtcc 720
agactcttgt gattggncna nggata 746

<210> 732
<211> 756
<212> DNA
<213> Homo sapiens

<400> 732
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cgattcgaat tcggcacgag gtggcccata agttttacct tttaaacatc cggctgcctg 120
tgaatgagaa gaagaaaatc aatgtgggaa ttggggagat aaaggatatc cggttggtgg 180
ggatccacca aaatggaggc ttcaccaagg tgtggtttgc catgaagacc ttccttacgc 240
ccagcatctt catcattatg gtgtggtatt ggaggaggat caccatgatg tcccgacccc 300
cagtgcttct ggaaaaagtc atctttgccc ttgggatttc catgaccttt atcaatatcc 360
cagtggaatg gttttccatc gggtttgact ggacctggat gctgctgttt ggtgacatcc 420
gacagggcat cttctatgcg atgcttctgt ccttctggat catcttctgt ggcgagcaca 480
tgatggatca ncacgagcgg aaccacatcg canggtattg gaagcaagtc ggacccattg 540
ccgntggctc cttctgcctc ttcatatttg acatgtgtga gaaaggggta caactnacga 600
atcccttcta cagtatctgg actacagaca ttggaacana gctggccatg gncttcatca 660
tcgtggctgg aatctgcctc tgcctctact tcctgtttct atgcttnatg gnatttcaag 720
tgtttcngac atcantggga agcaatccac ctgccn 756

<210> 733
<211> 742
<212> DNA
<213> Homo sapiens

<400> 733
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cacgagctca cacctgcttt ggatgcttca agcacctcag ccctctgaac tacaaaacag 120
aagagcctgc aagtgacaaa ggaagtgagg cagaggccca catgccccca ccgttcacac 180
cctacgtgcc tcggattctg aacggcttgg cctcggagag gacagcactg tctccgcagc 240
agcagcagca gcagacctat ggtgccatcc acaacatcag cgggactatc cctggacagt 300
gcttggcgca gagcgccacg ggcagtgtgg ctgctgcccc ccaggaggcc tgaggctggg 360
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acaagcttcc agctctgcag ctggggtgac atccccagtg gtttgtcgcc aagacatgtg 600
gtggactttt cgccccccaa actgatgagt nccggagaat atatggagag agagatgtaa 660
aaaaaaaaaa nnnnnnnnnt nntnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 720
nnnnnnnnna annnnananc tc 742

<210> 734
<211> 749
<212> DNA
<213> Homo sapiens

<400> 734
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cgaaaattta tagtaatgac aaatgactta tcagtgttca tcatctgaaa gctaagtggt 120
tcgttcaatc acttttttcaa agttgatagt agattgcatg gtttcatgtt tcctcatatt 180
ggtttattaa ttctatttaa tcaaggaaaa taacttcaga ttccataaag tttcagttta 240
tttttagttt actactaggt gagatagcac attacatact tttactatca aatattattt 300
tagcagcttc ccatagtacc aaatgatttg attccctact ctcatttttt aaagcatata 360
aatatttatg ggcttaaaaa gggggttttt aaaaactgag gatatcagta ataaattgca 420
gaatattttg caaagctttc ttttggaaag caaacttttg tgcctgccta tatgcaaagt 480
attttatcag ggacttgaac aaagacctca ctctttttca cttgtcttat gtcgagagaa 540
aagggtattg gcagccacat tcctaagact ggggaatggt gtgtcccttt aaatttgaag 600
ataactttan gtaattatng gaactcctca aagaggagaa agtaattttt tncagacatt 660
ttctcaatct gggnctttca cacactantt tncatagtcg agaatctggt tttacccatt 720
gggctgngaa tgtccaatat cagtcctgg 749

<210> 735
<211> 770
<212> DNA
<213> Homo sapiens

<400> 735
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catcgattcg aattcggcac gagggtgccc atcaccacac ccagctaact tttgtatttt 120
tagtagagac ggggtttcac catgttggcc aggctggtct tgaactcctg acctcgtgat 180
ccgcccgcct tggccccgca aagtgctggg attacaagca tgagcccagc gcctggctgt 240
atctttcatt ttacccaagt cactttaccc aagtaagtaa ttaggggaaa gcctgagtct 300
tgtaccacct gttcatttgg ggaactgtgg gaaacggagc caacggacct aagtgccctt 360
tgacagtgag tttcatacca tttcagtagt gtatttcttt cttaatctga ataaaccaga 420
atgatactct cagcacagaa gaataaaggg agcgagtcat taacgttntc tttttaaacc 480
tttatgatga cttnctttatg aattactgaa cgaacactgg aatgggactc acgtatcctg 540
aggacatctc tcaactctgg ccttantttc ccctctgtaa aattagggtg ccaactaaat 600
gatctacaag gtccctttnc aagcgcccgn cattctgtaa ttacatcatg tggaactgna 660
ttaaacatac accagtgaac tggcangcat tgggaatgta actttcccag taaaatgctt 720

tnggtttggt tcaaaataca ctntgaactt cttttcaaag acnggttnng 770

<210> 736
<211> 746
<212> DNA
<213> Homo sapiens

<400> 736
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catcgatgct natcnggcac gaggtgatgn cagcttgcaa actggtctac atnncaaact 120
gatagtacat tgccatctnc aggaagactt gacggctttg ggattttgtt taaactttta 180
taataaggat cctaagactg ttgcctttaa atagcaaanc agcctacctg gaggctaagt 240
ctgggcagtg ggctggcccc tggtgtgagc attagaccan ccacagtgcc tgattggtat 300
agccttatgt gctttcctac aaaatggaat tggaggccgg gcgcagtggc tcacgcctgt 360
aatcccagca ctttgggagg ccaaggtggg tggatcacct gaggtcagga nctcgagacc 420
agcctggcca acatggtgaa accccatctc tactaaaaat acaaaaatta gccangtgtg 480
atggtgcatg cctgtaatcc cagctcctca gtaggctgag acaggagcat cacttgaacg 540
tgggangcag angttgcagt gagcccgaga ttgcaccacc gtactnnaac ctgggtgaca 600
gagcgagact tatcttatan ataaatagat ngatcttcac ctgggtgaca naacgagact 660
tatagataga tagatagata gatggataga tngatngatn gatagataga ttgataaacg 720
gaattgggcc ttttgcttta atgaaa 746

<210> 737
<211> 751
<212> DNA
<213> Homo sapiens

<400> 737
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cccatcgatt cgaattcggc acgaggctga cctacagcag aagctgctgg atgcagaaag 120
tgaagacaga ccaaaacaac gctgggagaa tattgccacc attctggaag ccaagtgtgc 180
cctgaaatat ttgattggag agctggtctc ctccaaaata caggtcagca aacttgaaag 240
cagcctgaaa cagagcaaga ccagctgtgc tgacatgcag aagatgctgt ttgaggaacg 300
aaatcatttt gccgagatag agacagagtt acaagctgag ctggtcagaa tggagcaaca 360
gcaccaagag aaggtgctgt accttctcag ccagctgcag caaagccaaa tggcagagaa 420
gcagttagag gaatcagtca gtgaaaagga acagcagctg ctgagcacac tgaagtgtca 480
ggatgaagaa cttgagaaaa tgcgagaagt gtgtgagcaa aatcagcagc ttctccgaga 540
gaatgaaatc atcaagcaga aactgaccct tcttcaggta gccagcagac agaaacatct 600
tcctaaggat acccttctat ctncagactc ttcttttgaa tatgtcccac ctaagccaaa 660
accttntcgt gttaaagaaa agttnctgga caaaacatgg acatngagga tctaaaattt 720
ggtcanagca tctgtgaatg agcatganga t 751

<210> 738
<211> 795
<212> DNA
<213> Homo sapiens

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catcgattcg aagagcncan gcaggaagag agagaccctn actgctgggg anttnctgcc 120
acactcaagt ccccaaccca ctggaatctc ccctactaca agtgccatgt anacccctttg 180

aaaaggggag gggcctaggg agccgacctt gtcatgtacc atcaataaag taccctgtgc 240
tcaaccaaaa aganaantan anaaaactcn agcctctaga actatagtga gtcttattac 300
gtagatccag acatgattng anacattgat gagtntngac aaaccacanc tcgaatgcng 360
tgaaaaaaat gcnttatntn tgaaannnga natgctatat nnntcattnn ttaccattnt 420
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gnganntgtt tggcgttnat ntaattcggc ccnacncgng acccttttgc attgggcccn 540
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gcanangctg nttttcccnn tgtnnaaatt ggtttatcca gtttannaat ttcaacacga 660
tnaatatcaa acccggtaag cnattaaatg gtnaaaaacn ntgnggggng cccttaanga 720
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nggaaaacct tcccc 795

<210> 739
<211> 763
<212> DNA
<213> Homo sapiens

<400> 739
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tttntgcagg atcccatcga ttcgaattcg gcacgaggca nccttcgcct cctgggttca 120
agtgattctc ctccctcaca tcccaagtag ctgggactac aggcacgtgc caccacaccc 180
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tggagccacc gcgcccagcc tgatttcttt anntangtct tgtcangaaa natattgant 360
ctnttgattc ntnaacatgg cnttnggtcg tctttaatnn gnctcatcan tgcctccatg 420
tgttnttgat gccttngaac tggtattttt aaaatnncaa tttctaattg nnnattatnn 480
aaacacaatt gggntnnata tattggcatt gtattaatgc aactttccta aactcactag 540
taattctagt agcntnantt ggtanattct taaggatttn ctgngtnaat agncatgtca 600
tctgtgaatn aagccattct ttgancottt tcaaattttg agccttgtat ttcttattct 660
taccatatca cattggcaaa gacctccagt atganattga ataaangtgg tganagaaaa 720
caccctncta aaantgctng aattacaggc atgaaccacc ntn 763

<210> 740
<211> 765
<212> DNA
<213> Homo sapiens

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ctttttgcag gatcccatcg attcgctagc ctgggcaata tagtacgacc ctgtctttac 120
taaaaatgca aaaattaacc acgtatggtg gctcacacct gtagtcctgg ctactgagga 180
ggctgatgca ggagaatcat ttgaacccag gaggtcaagg ctgcagtgag ctatgattgc 240
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atagttccac gcacacacag aactcaccac tctcaaatat tttccccact agtattacta 420
ttaaattttt caaacatgca aaagatgaaa gaattgctca gtgaacacca tgtacccacc 480
acctagattc tacaattaac attttaccct actttcttta tcacatatat gtacctatcc 540
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gttgcagata tgtagcttat gtttcacctt aaatgtttct gcctggctat tattaactgg 660
agtgcaatat gtttttggnt cttctttatg gtaaaatcta tgttcagtga aatgcacaag 720
acttangtat gccattaata gggtttgacg aatagacaaa ccttn 765

<210> 741
<211> 753
<212> DNA
<213> Homo sapiens

<400> 741
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cacatcctgg ggaacaaggg accacaagga cgggggcagt ctccagactt cccctgggcg 180
cttgacccca ggccttgcag gggagagagc cagggcctcc ctcaggtctt tgttcatgct 240
gttttccctg ccgtggacac cctttcccgc tctccgattc tctaaatcct gccccatctc 300
ccagatcttg ttcatgtcca agcttttcca ggaagtctta gcagctccca caccgcagag 360
ctcgagatgt ctccctgact tggtcccaga ccccaactat gtgcaagcat ccacttatgt 420
gcagagagcc cacctgtact ccctgcgctg tgctgcggag gagaagtgtc tggccagcac 480
agcctatgcc cctgaggcca ccgactacga tgtgcgggtg ctactgcgct tccccancgc 540
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caactgccac cagcattacc acagcatgga cgagttcanc cactacgacc tactggatgc 660
aaccacaggc aaanaangtg gcccanggcc acaaaggcca atttctgnct ggaggacanc 720
acctgtgact tnggcaacct naaacgctat gcn 753

<210> 742
<211> 767
<212> DNA
<213> Homo sapiens

<400> 742
tnganccttt cgnttctncn ctcctaagcc tttgctactt gctctttttg caggatccca 60
tcgattcgca ggacatggag cagtacctgt ccactggcta cctgcagatt gcagagcggc 120
gagagcccat aggcagcatg tcatccatgg aagtgaacgt ggacatgctg gagcagatgg 180
acctgatgga catatcggac caggaggccc tggacgtctt cctgaactct ggaggagaag 240
agaacactgt gctgtccccc gccttanggc ctgaatccag tacctgtcag aatgagatta 300
ccctccaggt tccaaatccc tcagaattaa gagccaagcc ancttcttct tcctncacct 360
gcaccgactc nggcacccgg gacatcagtn agggtgggga gtcccccgtt gttcaanccg 420
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ctccggatgg tggtgaggac agncactctt aaattgggac atgggcnttg nctggccaca 540
ctggaatcca ngtttggctg tatgcngaat tncacctgga aaagccaagg ttggtntata 600
ganggtcttg atttttacnt anttgncaat aatgggttga gnaaacttaa agaaccagtt 660
taacaataaa atngttaggg acccgttnan aaaatggang tctnccttcc atntnaacct 720
ggannccttn aaacntttnt gngtccnaat tttcgttnca tccannn 767

<210> 743
<211> 768
<212> DNA
<213> Homo sapiens

<400> 743
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gggcttcgcg agnnntggga natnacanag gctngttanc ataccngttt ttnactgcan 120
aggnnnccac angcagcatg gcccatgnna tgnccatgcc antgatggcn ggnggccatg 180
ctgtcagcgg anncgcactt gtgaggancc nntntggann cngtanncna canncacccc 240
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gatggcccac gtncctgca tggancccc tgancngact ccaccagcct atacangngg 360
aagccanaag cagctgtttt cngccntgcc ctgctgataa tgccttgaag accccatacg 420
acctnnacgg nctacattga cantnngact gtgncancct ngatcagatn atcctggaac 480
tgggnccnng attccaggan cttnccntca atggacctgg gngcttgtaa tcngttntgg 540
accatacanc cnttgtanna gataaaagan ngaggaaatc tgaaaccntn gnaataagat 600
ctgnggcatt agtnnntcaa ggggaggntn ggtnncaaaa cnctatgagg aagaacgatg 660
gnactatgtc catgnaaggg gaacatntan tgttgganna tgcnatgcaa ncntnnccnt 720
gatntaacnc tttganaaac tnangcttna caaaggggga aaaanact 768

<210> 744
<211> 757
<212> DNA
<213> Homo sapiens

<400> 744
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gatcccatcg attcgcttga cctctgtact ttaaaggaaa tcactaacca aatttttcaaa 120
gtttcctttt aaatgcgttt agctagaaat ctatgtattt atccctttcc tattttgcat 180
tcttctccca ctatttttaa aaactcattt acagtagaaa ccattcttct ttctcccaac 240
agtatccttt gccaagacca tgagaacagt aaggagcatg ttgttggtca gggtttcaga 300
atacgcgtga tgtcactgag aatgtttgct cacagtcaat aattgtcttt gtggatgtga 360
taattttgga gatacacttc tggtcagaac tcaggtgaga taatcttgca atactccaaa 420
tgcagatact ccagccaccc gcaaggttcc aggaaaggac aatgtcctgc gagaaaatca 480
ggaggcctcc acttcctggg ccacttgaga agttcctggg catgtcacta catgttggtt 540
gactcagcca tttctcatgc tgntttgttt cttgcggtgg ccacttaacc ccaaagaatg 600
aanggaggat ccacagtgaa agtgcctgag tttctctatg agaccagatg ctgtcgaaac 660
caaacatctt ttcctttgct ctatnggaac attttaaggg ttggtttgca caactggttt 720
tcagactngg aagattacca agtttgggtc ccccctn 757

<210> 745
<211> 751
<212> DNA
<213> Homo sapiens

<400> 745
cttnttnnnt ttnntttgat ncctctacnc aaacccttgg ctactngctc tttntgcagg 60
atcccatcga ttcgaattcg gcacgaggaa naacagacag gtttcaacat ggatggatct 120
gaaatgctgt tgaagcatat catttgcata aaaatcaggg acagtttcca aagaattata 180
tatttttttc agttggctct ctagttagtt tttttgggag taaggacaaa cctggaatag 240
atagcaaaac tgaaaatcan cagtgctgat ggtggtacat atgtctttcc tttagcttct 300
cccctgataa ttcccatctg cttttacttc gggtgagcag agggggatgt gtgtgtgcgt 360
gtgtgtcagt ctgtttgtga gtgtgttaaa ggctacagac cacagttggt ttaaaatgct 420
tggaacttcc caaactggct ttactttatg tttatacagt gctcagggtt aacgcagtac 480
atccatgcca ttgctgtggg aggtatcccc ggatgcatgt gttttgagtc tataaatata 540
gaaaatatat attggtttct ttttccaact taatangttt attaaagcat gaaatgaaag 600
ggtgcatatc atgcattcaa gntatntcct aatttttggt ctgacagtgc atgtctttgg 660
agcatgctga aacaanaatn acacaggaat tgantaaccn gaaagaaaca ttgttaaatg 720
tccaacattt gttatgcatt tntattgggg g 751

<210> 746
<211> 760

<212> DNA
<213> Homo sapiens

<400> 746
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gcaggatccc atcgattcgc tgaaacaaaa gatgtatttc aattaaaaga cttggagaag 120
attgctccca aagagaaagg ctttactggn tntgtcangt aaaagaagtc cttcaangct 180
tagttgatga tggtatggtt gactgtgaga ggatcggaac ttctaattat tattgggctt 240
ttccaagtaa agctcttcat gcaaggaaac ataagttgga ggttctggaa tctnagttgt 300
ctgagggaag tcaaaagcat gcaagcctac agaaaagcat tgagaaagct aaaattggcc 360
gatgtgaaac ggaagagcga accangctag caaaagagct ttcttcactt cgagaccaaa 420
gggaacagct aaaggcagaa gtagaaaaat acaaagactg tgatccgcaa gttgtggaag 480
aaatacgcca agcaaataaa gtagccaaag aagctgctaa cagatggact gatnacatat 540
tccaataaaa tcttgggcca aaagaaaatt tgggtttgaa gaaaataaaa ttgatagaac 600
ttttggaatt ncagaagact ttgactacct ngactaaaat attccatggt ggtgaaagat 660
tttcaagctt gngaatttgt aaattttnaa ctattatcta actaatgtnc tgaattgccn 720
ttggctgtac tgggttatca ttttattaat ggtaaataaa 760

<210> 747
<211> 786
<212> DNA
<213> Homo sapiens

<400> 747
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caggatccca tcgattcgaa ttcggcacga ggaggctgtg tcaaagaatg aatggaacgc 120
ctactatgag gaggtgggtg tacgtnctag anggagatcg agtacatgat ccagaagctc 180
cctgagtggg ccncggatga gcccgtggag aagacgcccc anactcanca ggacgagctc 240
tacatccact cggagccact gggcgtggtc ctcgtcattg gcacctggaa ctaccccttc 300
aacctcacca tccagcccat ggtgggcgcc atcnctgcan ggaactcagt ggtcctcaag 360
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gacaaggatc tgtacccagt aatcaatggg ggtgtccctg agaccacgga gctgctnaag 480
ganaggttcg accatatcct gtncacgggc agcacggggg tggggaagat catcatgacc 540
gctgntgcca agcacctgac cctgtnacgc tggaactggg aaggaagagt ccctgctacg 600
tgggacaaat aactgtgaac tggaccttgg ncttnctaac attggncttg gggggaaatt 660
catnaacaag ttngccaana cctgcgtggg cccctgaaat acattctttt nggacccccc 720
tgnatccaga accccaattg nnngnngaaa acttnaaana aantnncttt naaaannntt 780
tttnct 786

<210> 748
<211> 722
<212> DNA
<213> Homo sapiens

<400> 748
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ctgctccact tgtctgggaa cctgggcagg aggcacagag gaagccaagg cctggagctg 120
caggtccccc ggcatctctc tctgtcccgg cagcccagga tggcctggtg cccccacctg 180
ctgcagcagg agccccaagg agtgctagct gagggtggtt gctggggtgg tcctcatgga 240
cagtgaggtg tgcaagggtg cactgagggt ggtgggaggg gatcacctgg gttccaggcc 300
atccttgctg agcatctttg agcctgcctt ccggtgggag canaaaaggc cagaccctgc 360

tgagttanag gctgctggga tccactgttt ccacacancn ggaaggctgc tgggaacagg 420
tggcanagaa gtgccatgtt tgcgtngaac cttgcantct tncanctggg gactggtnct 480
tgctgaaacc cacgagctgn acantnanga gctgtccanc ttgcttggct cactgngacc 540
aggaaagcct gtctttggtt agctcgtgtc ttctgcagga aaaaaaaaag gatgtgtcat 600
ttggccatga tatttgaaaa aggggaagga tngccnaant ttgtttncca tttattccag 660
tanttggaaa atttttgac cccctnngct taattctttt gcaanaacta ctgggggtn 720
tg 722

<210> 749
<211> 821
<212> DNA
<213> Homo sapiens

<400> 749
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acatacagta agaatatggt attataatct tacggggacc actgtcaaat cgcggtctgt 120
ctttgaaaag ttgtnatggc ggcgcatgac tataaatacc ctagctggtt agcatttaca 180
ttccttgcca gggagtttga aatttatnct nggcgggctg nctttaggnt ttaggtagag 240
ttaaagaggt aaagcacatg tttgccacaa cccaggaaag tatttttaag aaagatttgg 300
attttcctac ctttagagat ctaaaaaaaa tttaatataa aaaatcattt tgagntggtg 360
tttattacta gttcagaatg agtggctgct gaaggggggcc cccttgnnat tttcattata 420
acccaatttt ncactttatt ttgaactctt aagtcataaa tgtataatga ctttatgaat 480
tagcacaggn taagttgaca ctttgaaact ggccatttct gnattacact atcaaatagg 540
aaacattgga aagatnggga aaaaaaattc ttatttaaa atggcttaga aaagttttca 600
agattacttt ggaaaattct aaacnttnct ttctgngttc caaaactttg gaaaatatgg 660
tagatnggac ctcattgcca tttaagactg gttttcaaaa gctttccctc aacatttttt 720
aaaggtgtgg anttttccct ttttaaatat tccataattt aantttcctt ttnaaaggcc 780
nctnnttttc ccaaacccat ngnctttggg ggnaaatccc c 821

<210> 750
<211> 770
<212> DNA
<213> Homo sapiens

<400> 750
gntttnnnnn nnctttnttn nntgnctntt tctaagagct tngcnnatgc tnggtcggca 60
cgaggcaaca tttgtctaca actctactgt aaaattggaa atgcttttcc acagaaaaac 120
ctctcaaaat gctgaatgca aaagttggga tcacagaaac attgtgccta tttttggtct 180
gctggaaact gtatttntac aaggtaatcc ctgttctcaa tatagttcct gtcttgccac 240
tggcggtttt cttgtagcat ttttctagtt ctgagattgc tactacccaa agtattcatt 300
tctttcttac tggggtgtcc tctgtcttca cagcctgctt ctggattgta ggtttttcc 360
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ctcaagagtt gactgtggac gaggaatgcc tgtattgatt cattaatgta ataactattt 540
actgactgcc taccatgtac aaccagaaac acagttccta acctcatgaa cttaccatgt 600
aacatgggaa gacaagccta agttcttatt tggntggnaa ttgcgataac gctcacagaa 660
caaattcccg attcctacga acccatgtat agggggggaaa tatttaaggt cccatttaat 720
actgacattn gcccncccccc ctnntatttt aagctgagaa tctgaaggnn 770

<210> 751
<211> 774

<212> DNA
<213> Homo sapiens

<400> 751
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tgtcagttct gtgtagactt tatgtcagtt tttgtcatta tttgaaaatc tattctgaca 120
acttttttaat tcctttgatc ttataagtta aagctgtaac aactgaaatt gcatggatca 180
agtaagcata gttttatcca gggagacngc tcnnnggaag ccatagaatt gctctggtca 240
aaaccaagca caccatagcc ttaactgaat atttaggaaa tctgcctaat ctgcttatat 300
ttggtgtttg ttttttgact gttgggcttt gggaagatgt tatttatgac caatatctgc 360
cagtaacgct gtttatctca cttgctttga aagccaatgg gggaaaaaaa tccatgaaaa 420
aaaaaagatt gataaagtag atgattttgt ttgtatccct acccatctcc tggcagccct 480
actgagtgaa attgggatac atttggctgt cagaaattat accgagtcta ctgggtataa 540
catgtctcac ttggaaagct agtcctttta aatgggtgcc aaaggtcaac tgtnatgaga 600
taattatccc tgcctgntgt ccatgtcaga cttttgagct gatcctgaat aataaagcct 660
tttaccttat ctggaaaaaa aaaacattnt anancaaaaa aaaactnnga gccctttana 720
actnttagng agnccntttt ccgtagaatc ccngacntgg ntaaggaanc nnnc 774

<210> 752
<211> 778
<212> DNA
<213> Homo sapiens

<400> 752
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gagaagaaac tctgcctcag aaaatgttta cagcttccag tggaatcaaa cataccatga 120
ccncaattta tccaagttct aacacattag tagaaatgac tcttggtatg aagaaattaa 180
aggaagagat ggaaggggtg gttaaagacn ttgctgaaaa taaccacatt ttagaaaggt 240
ttggctcttt aaccatggat ggtggccttc gcaacgttga ctgtctttag ctttctaata 300
gaagtttaag aaaagtttcc gtttgcacaa gaaaataacg cttgggcatt aaatgaatgc 360
ctttatagat agtcacttgt ttctacaatt cagtatttga tgtggtcgtg taaatatgta 420
caatattgta aatacataaa aaatatacaa atttttggct gctgtgaaga tgtaatttta 480
tcttttaaca tttataatta tatgaggaaa tttgacctca gtgatcacga gaagaaagcc 540
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tttctctgac cgcctactgg gaaatatttt taagtggaac caaaataggc atcccttacc 660
aaatcaagga agactgactt ggacaccgtt tggaaaatgg gtaaaaacgg tggnttactg 720
gtganttggg gagcnagaac cggacccact ggtatactgg ggantaacaa tttttttc 778

<210> 753
<211> 775
<212> DNA
<213> Homo sapiens

<400> 753
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taaaagagat gaacaatacc gtatcatgtg gtttgaatta gaaacccttg tcagagccca 120
tatcaacaac tcagagaaac atcaaagagt cttggaatgt ctgatggcat gcaggagcaa 180
acccccagaa gaggaagaac gaaaganacg cggctgaaag agggaagaca aagaggacaa 240
gtcagagaaa gcagtgaaag attatgaaca ggaaaagtct tggcaagact cagagagatt 300
aaaaggaatc ttagaacgtg gaaaagaaga attggctgaa gctgagatta taaaagattc 360
gcctgattcc ccagaacctn caaacaaaaa acccccttgtt gaaatggatg aaactccaca 420

agtggaaaaa tcaaaagggc cagtgtcgtt attatccttg tggagtaata gaatcaatac 480
tgccaattcc agaaaacatc aggaatttgc tggaccgttt gaactctgtt aataacagag 540
ctgaactata tcaacatctt aaagaggaaa atgggatgga gacaacagaa aatggaaaag 600
ccagccggca gtgaagagtg acttgangaa ctaaatttta gcatattgca aaaatatttt 660
gtgcgggaat tcgatatnag tacttttacc agcaagatgg natngttatg tttgcctgga 720
ctggntttta catttttnaa atttttttcag tgnccttttt tggtcctaaa ttatc 775

<210> 754
<211> 1032
<212> DNA
<213> Homo sapiens

<400> 754
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cccggaaggt tccnaaattt tnagggttna aacccaaatc cttggggaaa aaaaaaaaac 180
ccagggccnt ntntggggnc cccctngggg gggtngggaa aaaaaaaaaa gggggaatgg 240
cccccaaaaa aaaatnnggg gccccctnggg ggaaaaaaaa gggaaagccc aggtngggaa 300
nggaaagggg gaaggntccc ccgggggggaa aggaaatggg tgggtnggna atggcccaat 360
ggttggaaaa ggcccaaacc aatttgggnt ntaaaacaat ttcaacctgg gggggtcctg 420
gcccanaaaa aatgcngggc acccncgngg ggtctggctt aagaattggt tacaagggca 480
aagggaaagg gaagagttct agagataaag aactatatgc ttggatgaag tgtgtgaagg 540
gacagcctca tgatcacaaa catttaatgc caacccaaat tatacctggt tctgttttga 600
cagatcttct agatgccatg cacactctta gggaaaaata tggtattaaa tcccattgnc 660
attggactaa caaacagaat ttacaagttg gaaattttcc tacaatgaat ggtgtatctc 720
aagttttaca gaatgntctt aatcacagna ataaaatttc tctgtgcatg cctgagtctt 780
cagcagcaaa aatactcctc cgaagtctga gaaaaatggn ggcagcagcc caagaagagt 840
gatgtaggca cagataacna aggntaacct cctccagaat ccccagtcac cactgcactg 900
gttaagcaga acttngcagg agcaaaaaag cccngangan ggaaaaaaaa aannaaaaaa 960
aactcggagc cctcttagaa ctatangggg ggccgnnnta ccgnangatc cccgacctga 1020
anaggaaccc cc 1032

<210> 755
<211> 798
<212> DNA
<213> Homo sapiens

<400> 755
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gtaaattggn tgaattattg tattgaagct tgagctgtat tttnaagtaa tttnggttnc 120
ccctaagatg ttattatgtt agggacataa cacttttggg aggttgttgt gggagatggt 180
tgatttaggt tttcaaaagc tagaaataaa atttacatnn ccccggntnn cataaaattc 240
tgctctaatt gggtggaagg tgctgtatct aacttgtgtt cctnctaagg ttatgtccta 300
ataactattc ttttaggagt atacttctac tttatagaag gttgcttttt ctttttaatt 360
ttntctaaca aagaaaagaa tnaagtattt attaataaag aaccagaaag cacttgaaac 420
tgatgttttt aaatgggctc acttanggta gatttattta tctcattaac ttaaaaacag 480
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ccccttttctt atggggaaaa acaaatggtt cttgtttgaa cangaaggta tcattgcagt 600
cngcattcac ccgtgtataa ttgnnatata agntgnataa tatgctcgta aaggctnaag 660
gtnagctgga tctggatgcc ctttnaccaa ttangatttt aacttttaan aataaaattt 720
naaanctaat tgncnaaata aaaaaaatan naaacttcgg ncctctacaa nttntagatg 780

ngtcgattnn cgnncanc 798

<210> 756
<211> 834
<212> DNA
<213> Homo sapiens

<400> 756
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tccttcagct ggtagcttnc attcgnantt nnanatanta tntgtgcatg cncnnttgaa 120
tttttgtgga agaacagant gcagaagaag gcnaggaaag ccgaagagan tnntncggca 180
ncagaagctt aaagnaggcc aaactggtgg tgcnctttcc tcggnacaga agctggatga 240
ctatggccaa tttggagaaa nagctccagg agatggaggc acggttcgag aaggagtttg 300
nagatggatc ggatgaaaat gaaantggaa gaacatganc tcaaagatga ngatggatgg 360
taangacagt gatgaggncc gaagacnctg agctctatga tgacctttta ctgnccanca 420
tgtgacaaat cgtnaanaac agtaaaggcc atgaanaatc acntagaagt caaangaaag 480
cnnttgggaa aaatggnggn nctttgntaa aaccacnagc tgganggang gaagaannna 540
aaatttttta agnacctcaa attgattgaa aaatncatta tgatgacaat tcctgnanga 600
ataaattggn agatgcncta naancaaaan gcnttttttn antnnaaana nacaaannnt 660
nnagcctntt ngaacntata gtnnannctn cntttanctn tntatcccgg actttnttnt 720
ggataccntt gactnagctt ttggacaaaa ncncnacttt gtattncatt ngnnaaaaaa 780
atgcntttat ttttcgnaaa tttggtgaat ncntaattng ntnntattnn nnnc 834

<210> 757
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 757
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gccccttggg gaaagggncn tttccnaagn aaaggggtng gaaaattttn taaatggcct 180
tttnggggggg aaaaagcccc ctnggaatnc ccccaaaaaa cccttgggaa aaaggggggа 240
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ctggtttggg aaagggaaaa gggttggtct tggtcttggg ggaanggaat tgggggccaa 360
nttaaaatgg aaggtttggc canaatnggc cncttcgggg gcttnttcaa aagccaagcc 420
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tancaggaaa anggagatga aaggccttct tccaaggaag gtaaggtcct ttggctgccc 540
cnacttaaat gctttttgaa antctcttag atgtggnaaa tatttttttcc gaaccttgaa 600
atcaactngg tagaatttca attggaagca taatccattg taaaatatat tttagttgat 660
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tgaccaggaa agattttnaa aagtaccttt ctttttaagg aaaaaaaaaa attaaatttt 840
gaagaaaaat tgggatttgg attttanaaa aaangggaaa aaaaatatna ntattnatan 900
ntcnnannat nnttnatnnt ctanntantt nctntnnnta ntnctnntnt ntnnannnna 960
nannnannaa ataaatantc nnncatnctt anctacanat nccnntcttn nttntannac 1020
tttnannnta nntatctaan tctntcccta ttntaccctn nc 1062

<210> 758
<211> 845
<212> DNA

<213> Homo sapiens

<400> 758

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tgtgttcctg tcantcacgg gtgagcanta tggaagcccc atccgtgggg cagcatgaag 360
gtccacggca tgcccaattg caacacgcac aaatacttgg aangccatgg aangcatntt 420
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ggattgggtg ggantggang gttgcaagtt ngggccnttt tgaaaggcca ctttttggna 540
aaaaactttt gggtttttaa ngggttcntc aaaatgccct ttgnnaattn aaagaaatgt 600
tgggcctatt naaaaaaaan atnatacttt atntaatctn nataataata nttantaata 660
aaantcttnn agccttttta aaantttttа atgaanctct ttattttanc gttanantnc 720
ntaacnttta attaaaggaa taacaatttg ttgaantttt ggtataaana ncccccantt 780
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<210> 759
<211> 947
<212> DNA
<213> Homo sapiens

<400> 759

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naaaatnggg ggaanaantn nnnaatgggn antcccttna angggaaaaa naatttnncc 240
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gcttttactg gnataatcct tnncggcccg cnctggtagt ttaaagtgcc canaanttga 360
atgggaaatn acgggttttg aaaatcgcac aaagcagtgc cnggcacnga ggngtcacgc 420
cngtaatncc agcattttgg gaggcctgag gcangcggat cacganggca anagagtcca 480
gaccattnct ggctaacacn gggaaacccc gggnctaata aaaaatcaaa aattaggntg 540
gacatggtgg cacgtgccng taatcncagc tacttangga agctggatgc aggaagaatt 600
gcgtgnnanc cnggccccng tggaangntg cattgatacg aagaaccgtg ccaaatgaan 660
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<210> 760
<211> 759
<212> DNA
<213> Homo sapiens

<400> 760

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agaagatatg cagagatatt ccaggatctt ttagctttgg tgcggtctcc tggagacagt 120
gttattcgcc aacagtgtgt tgaatatgtc acatccattt tgcagtctct ctgtgatcan 180

gacattgcac ttatcttacc ggctcttctg aagggtctat ttctgaactg gagcagctct 240
ccaattctct accaaataaa gaattgatga cctcaatctg tgactgtctg ttggctacgc 300
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ctctgcatag tttactgaaa cgagtggtca gcacatttag taaggacaca ggagagcttg 480
catcttcatt tttagaattt atgagacaaa ttcttaactc tgacacaatt ggatgctgtg 540
gagatgataa tggtctcatg gaagtanaag gagctcatac atcacggacg atgagtatta 600
atgctgcaga gttaaaacag cttctacaaa gccaaagaag aaagtncaga aaaatttgtn 660
ccttgaacta gagaaacttg ntntggaaca tttcaaaaga tgaatgacaa tctggattcn 720
ttggtngaca gtgtaatttg gactttaacc ngatgctcg 759

<210> 761
<211> 752
<212> DNA
<213> Homo sapiens

<400> 761
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tcgcccccag gcctaggacc gcggtgggtn ttaaccctgc tnctgcccca acagggactc 120
caatcaatcg gagttctccc cttgccggag ctgcccttca cctttggggc ccgagacagt 180
cataagggat ggacttacnt ttcttgcagg gaaaaaggtg gacagccgtg tttcttaagg 240
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atttactggt tacagctggc cagtgcanan ctgctgctct tttacctttt taggcccctg 600
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<210> 762
<211> 1032
<212> DNA
<213> Homo sapiens

<400> 762
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agnannnatn aannggntaa ncnatanana tantncattt ggtanganaa tngangaagg 360
attntcaaat agncatgtng gangatgaac ntnnaggnnn nagaatattt ggataaaatt 420
ggtantatga agatntggnn taataatacc nanaaatnnn nnantttnat nanngangaa 480
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gntagnnnta tnnactttgg naancanana tgtaattctc tctanacggg aatntttnta 660
tnntnnntat caagaggtnt ntnnattgna aatantatac nnttgnanaa antatatcna 720
tanaanaaan ggnnattatt ntatatganc aaanaaaaaa ntattgngga nntanattat 780
ctctcatnat ngattatncn gtantgtata atggnnnata antatgtnnn tntaanataa 840

atggatataa gtnttatant atgcncntna aggnggtcng anaantatgt aattatattn 900
angctanata cnatnnanat gtntnactaa atatngntgt gaaangtntg cgnggnaaaa 960
tntgttanta ntnaaacang gtataganat atanatgngn ngaatatcta ctatntgtan 1020
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<210> 763
<211> 817
<212> DNA
<213> Homo sapiens

<400> 763
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gcctccctca gaggtttgga gtcgggcgtg gcatgctgct gttggcctct ttccgaggga 180
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ctnctngnaa aagcagtttt ttcaccncat natgaagaaa aaacttgttg gcttgganng 660
tanngggatt nttgntnana cttnccctaa anggntncct ttnggggcat ttntgaaggn 720
taaataatgg gggatacctt tttaannttc cttgcagatt taaaaatgtt ccttaaanga 780
nncctcaatg nttnggtctt nttccaaaaa acnattc 817

<210> 764
<211> 777
<212> DNA
<213> Homo sapiens

<400> 764
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cggtgctgaa catcatcatc tttgaagact gtaggaacca gtggtctatg tcccgaccac 120
tacttggctt gatattgctt aatgaaaagt atttttctga cctaagaaac agtattgtga 180
acagccagcc acccgcgaag cancnggcca tgcacctgtg ttttgagaac ctgatggaag 240
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acactcacta nggggcaagg cgctgcttgg ttcctggggg gactgggtgg gaaagggtgg 600
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aagttgggga gnaacccccc antggtncct gccaacaacc ttgccttggg attaaacatt 720
ntncattttt ttcantaana tttttgaaca aagggttant attgnctnaa gtttann 777

<210> 765
<211> 774
<212> DNA
<213> Homo sapiens

<400> 765

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agtaccctct tacttacaga ctgcagtgga aaaacatctt gactacttaa aaaaanggga 660
catatttgaa aaatcctggg agaanggact atttggctnc ttttgccaac ttacttcata 720
ctggnaagcc agattantng ctcaaggaag ttttgatgag ccaaaaaagt tttn 774

<210> 766
<211> 779
<212> DNA
<213> Homo sapiens

<400> 766

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cttcggcggc ttccacctag acacctaaca gtcgcggagc cggccgcgtc gtgagggggt 180
cggcacgggg agtcgggcgg tcttgtgcat cttggctacc tgcgggtcga agatgtcgga 240
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tcatttttgg tttggaacac gaatttaagg cctgctattt accctggggt atccttggat 720
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<210> 767
<211> 799
<212> DNA
<213> Homo sapiens

<400> 767

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ccttacaaga aatgaaatag gtttttagca ctcttagcat tagagttcct agattggtgt 480
tgatagctac agttttaaaa tgtataacct gaaaatgaag gttaattttg cattgtaaag 540
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cactttcata ttaagtagca tgtgtatgaa tttaagattt tcatatttgn tgngtctggt 660
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aattaaaagc caccttatac tctgctgctt aacttgcttg naaattgcac ctttggnacc 780
ctgcacattt tcatattnc 799

<210> 768
<211> 826
<212> DNA
<213> Homo sapiens

<400> 768
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gcagtttaca gctcctggat gaaagagcat ggaggatcta tcgtcaatat cattgtccct 180
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aaactantcc ttggnaanta ttttccaggn cttnantgtn cccncn 826

<210> 769
<211> 802
<212> DNA
<213> Homo sapiens

<400> 769
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caagcctgga gctgcaggtc ccccggcatc tctctctgtc ccggcagccc aggatggcct 120
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aanaactaac tgngtggctt gttcncttac ccttttttcan gnttaattgg tttnaatttt 720
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<210> 770
<211> 1157
<212> DNA
<213> Homo sapiens

<400> 770

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gaagctagaa cattagaagc tttggaanag ggcggnggag aattgaatga tntttgnttc 660
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<210> 771
<211> 760
<212> DNA
<213> Homo sapiens

<400> 771

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gctacttggg aggctgaacc aggagaatct cttgaacctg ggaggcanag gttgcaagtg 600
agcccgagat cgtgccattg cactccaacc agggcaacaa gagtgaaact ccatcttaaa 660
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catgataaga tacattgatg aattttggac aaaccccann 760

<210> 772
<211> 777
<212> DNA
<213> Homo sapiens

<400> 772

gaaancccat ttnnnnnttc cncttcnaat cccttggnta ctcgntcttt ntgcaggatc 60
ccatcgattc gaattcggca cgagctctac taaaaataca aaaattagct gggcgtggtg 120
gcacacacct gtaatcccag ttacttggga ggctgaggca caagaatcgc ttgaacccgg 180

gaggcggagg ttgcagttag ccaagatcgc cctgctgcnc tccagcctgg gcaacagagg 240
gagactctgt ctccaaaaac aaaaacaaaa actgttagtg aaggttccct gggacttttg 300
atattttaaa aattgttctt atgactagta gataaattca ttgccataat gaggctagct 360
cccagataaa cagtgtattt tcttcttttt ttttttggtc gagtggtcca gagctttaag 420
ctacttttcc agtagtttgc cactttctcc gaggtanttt ggctgctctt tcagtaatgc 480
taattgtgtg tcaaattttg tctacaacag taggcaacag atgaagataa gttggttgaa 540
tgtctccagc actatgcatc cctattttct atttattggg gtacactcac tttcagtaat 600
gngtttcaaa ctggtatttt ttaaaaaaca aatcaatgta aggactgaag ttgaaatanc 660
caatgtaata aagttaatta gggttatttt taaaaaaaan aaaaataana actcnagccc 720
tctagaaact atangtgagt cgnnttacct tgaatcccag accttgataa gatacnc 777

<210> 773
<211> 782
<212> DNA
<213> Homo sapiens

<400> 773
gnntnnattc ccctttcnaa tncttggcaa acgctctctn tgttggatcc catcgattcg 60
aattcggcac gagacagtct cgggtttcat attttgctgt ttttgatgga catggaggaa 120
ttcgagcctc aaaatttgct gcacagaatt tgcatcaaaa cttaatcaga aaatttccta 180
aaggagatgt aatcagtgta ncncccgccg tgaagagatg ccttttggac actttcaagc 240
atactgatga agagttcctt aaacaagctt ccagccagaa gcctgcctgg aaagatgggt 300
ccactgccac gtgtgttctg gctgtagaca acattcttta tattgccaac ctcggagata 360
gtcgggcaat cttgtgtcgt tataatgagg agagtnaaaa acatgcagcc ttaagcctna 420
gcaaagagca taatccaact cagtatgaag agcggatgaa gatacagaaa gctggaggaa 480
acgttaaggg atgggcgtgt tttgggcgtg ctagangtgt cacgctacat tggggacngn 540
cantacaagc gctgcngtgt naccttttgtg ccccgacatc agacgctgcc agctnacccc 600
caatgacagg ttcattttgn tggccttgtt atnggctctt naaaggnctt tnccccatna 660
aggaagccng tggaactttc atcttgncct gnantcgang atnaaaaagn atncagaacc 720
cggggaaggg gaaaatcctn aannctgact tcccggtttc caaaccagtn ttgnaacaaa 780
nc 782

<210> 774
<211> 793
<212> DNA
<213> Homo sapiens

<400> 774
gnannngccn cgnttttgat tccccttntt caaatccttt gnnaatcgcc ctcnctgttt 60
tgatcccatc cgattcgaat tcggcacgag atggcagttg cttttgaagt atatgatgnn 120
ttcctccact acaaaaaggg gatctaccac cacactggtc taagagaccc tttcaacccc 180
tttgagctga ctaatcatgc tgttctgctt gtgggctatc ngcactgact cagcctctgg 240
gatggattac tggattgtta aaaacagctg gggcaccggc tggggtgaga atggctactt 300
ccggatccgc agaggaactg atgagtgtgc aattgagagc atagcagtgg cagccacacc 360
aattcctaaa ttgtagggta tgccttccag tatttcataa tgatctgcat cagttgtaaa 420
ggggaattgg tatattcaca gactgtagac tttcagcagc aatctcagaa gcttacaaat 480
agatttccat gaagatattt gtcttcagaa ttaaaactgc ccttaatttt aatatacctt 540
tcaatcggcc actggccatt tttttctaag tattcaatta agtgggaatt ttctggaaga 600
tggtcagcta tgaaagtaat agagtnttgc ttaatcattn ggaattcaaa catgctatat 660
ttttttaaa aatcaatgtg aaaacataga cttatttta aattgntacc aattacaata 720
aaaataatgg gcaattaatt tttnaaaact ttttaaaata gnatgctcat atttttaaaa 780

ataaaanttt tnc 793

<210> 775
<211> 1009
<212> DNA
<213> Homo sapiens

<400> 775
agcnttttttt ngaanttccc ctttnnttna aaaatcccct tttttggcaa aaaattnccc 60
ccntntntna nngtttttnn gatncccaca tncngnaatn tncgggcncg ggnnactgnc 120
nannggcncc cttcgggggn ccngtgntaa gncnatnctt gtntntanaa agntggnnnt 180
nttttncgat ngngactatt gncnacnctc ttccntnttg gcagngngtc tgganggttg 240
nggtngctca tntggntaan ccnatcctgg ngaccaanng gccgnggtgn gcntgcaagc 300
tttgnccacn tgggaaancc gnnagtggtn gtctcanttg cntgntgggn ncntgncccc 360
atcttgnctg ctgnancctt ggggagcagg nnctnggtng tggtnctgcc tgcttgctgc 420
tngttccccg ggcatgcgtn nncannaagg gncatgcntn gggcaanaag gtgcgtggnc 480
ancgtnngna tnnnnaggac caccntgggt cgngaatcnn tgggttncct gataggaacc 540
ntnaannnct gcngntttta ttaaatggga nnananggggt ncanttcaaa gccagtnnaa 600
tgcccttatg gaanggngtg natnacatan cnnnntatgt gtcntanann angaaatcgt 660
tnnncaaatt tnnacaanaa tntttntaan aaagggtatt tnantntngg tgaaanaaca 720
angntttaaa gtnaaatgnt tntancanaa ttaantaaac nggtnttnat gattncttac 780
naaantaacn atncnnaagc atttacngct tanangtccn cnngatactn ncanaatatg 840
gnnnnaattn tannanatng cgataatctn gnananactn tcatnnnnna tngtgtaatc 900
antanntacn tgatttnnnt naaatgaaaa catntgatnc aagattaatn cattanntat 960
acnaaaatnt tcanatanta natntacata taatggtttc naataaacn 1009

<210> 776
<211> 785
<212> DNA
<213> Homo sapiens

<400> 776
gnnnnnnntt ccccttttcta atcncttgga nntcgctctn tntgnangat cccatngatt 60
cgaattcggc acgagagaaa cacaggtgtc gtgaaaacta cccctaaaag ccaanatggg 120
aaaggaaaag actcatatca acattgtcgt cattggacac gtanattcng gcaagtccac 180
cactactggc catctgatct ataaatnngg tggnntcgac aaaagaacca ttgaaaaatt 240
tganaaggag gctgctgaga tgggaaaggg ctccttcaag tntgcctggg tcttggataa 300
actgaaagct gagcgtgaac gtggtatcac cattgatatc tccttgtgga aatttgagac 360
cagcaagtac tatgtgacta tcattgatgc cccaggacac agagacttta tcaaaaacat 420
gattacaggg acatctcagg ctgactgtgc tgncctgatt gttgctgctg gtgtnggtga 480
atttgaagct ggtatctnca agaatgggca nacccnaaag catgcncttn tggcntacac 540
actgggtgtg aaacaactaa ttgtcggngt taacaaaatg gattcacttg accaccctan 600
aggccngaag agatattgan gaaattgtta aaggaagtca gcacttncat taagaaaatt 660
ggcctacaaa tccnnganac aataancatt tgtgccaatt tnngggttgg gaatgggtga 720
ccaacattgc ttggagccca agtgnttaac aatgccttng gttnaaaggg antggaaaag 780
ttacc 785

<210> 777
<211> 1366
<212> DNA
<213> Homo sapiens

<400> 777

ananaanann annnnnnnaa ggnnaanana nnnnnannnn naanangnaa anananannn 60
tnnanaannn aagnngnttc nanncttttc aaagcttgga aaacgcannc aannnnnggg 120
aaagcaagaa agaacagcta aagnnngncn cagaganagc ttttangang tntangaaga 180
aggaatannn gnggncaata nnnnannnnc ngaaantatc atganacnca aatganggan 240
aaggcagcac aagctgngca aacagctatn gngacggggg ggccgggaga gnctaaangn 300
cananatnca atatataagg actgcatgcn aagggatacn aaacaagnan actnntctag 360
gaagaaataa ntnttgacnt ancnnacntt cataacgaat agcaccgtac atcgagncaa 420
ccaactaana ggnctaagga aatggcaaan nacnttaatn nntgagcnaa ggaagggngt 480
atngnccnan anngaaatgc ntcntaacca anttttaatn gtaacggnat nangatnaan 540
ncntnanccc acgcaactca aaaanattac attanntaaa aaaganctat ancaaaacta 600
gtnttcaaaa tngnacgagn aaatgggnaa nantttntnn ccgggaaaat tggnagagat 660
ccanaaacac tggntnaggg naatanatgn ccgcccnaaa aaaccntnac cataggnatn 720
ggctancata gangagatat ancnatnagg ggatcaanan cntaggnatt ngaaaantaa 780
ncgagttaaa acancnagat nnggnantac gaganatagc ttggacgngt atcaaatcgg 840
accctnggat gggcntangg aaaaanaaaa aggntngagn gaanttcctc anaggaanng 900
tganagagcn aaanaanatn aagggccttg gngaaaangg aaaaacagat agngtcatnc 960
natatatncn natgananan tggggnaatn taatctacnn tanatnnggg ggaaaaaaat 1020
cnnncatgac nnnaaaanga gntaatgnna nnatgagaga ttaaacnnat aaaacnagag 1080
aantttgngn aaanctgnga gataaaaaat aaataaattc tntntggaac atntanaccn 1140
tctatnnaaa aaaaagaggg gaaaccatct ngattatgca cananaaatn tnacntngng 1200
gaaataaatn gggnacaata acatatatgn ggatgtacan tnntggncng aaaaactata 1260
caacntgaga nnnnacnang atataaagcn nnaggnagtn tatangggca tcatcaangg 1320
gaagntataa agcaactgna nnctcatata naaaactgnn cnncaa 1366

<210> 778
<211> 775
<212> DNA
<213> Homo sapiens

<400> 778

gntttnnatn cctctttcta atnncttggc tactcgntct ntctgnanga tcccatcgat 60
tcgaattcgg cacgagagat tatgagcatg tagaagatga aacttttcct cctttcccac 120
ctccagcctc tccagagaga caagatggtg aaggaactga gcctgatgaa gagtcaggaa 180
atggagcacc tgttcctgta cctcccgccg ccgaacagtt aaaagaaata tacccaagct 240
ggatgctcag agattaattt cagagagagg acttccagcc ttaaggcatg tatttgataa 300
ggcaaaattc aaaggtaaag gtcatgaggc tgaagacttg aagatgctaa tcagacacat 360
ggagcactgg gcacataggc tattccctaa actgcagttt gaggatttta ttgacagagt 420
tgaatacctg ggaagtaaaa aggaagttca nacctgttta aaacgaattc gacttgatct 480
ccctatttta catgaagatt tttgttagca ataatgatga agttgcggag aataatgaac 540
atgatgtcnc ttctactgaa ttagatccct ttctgacaaa cttatctgaa agtgagatgt 600
ttgcttcttg agttaagtag aagcctaaca gaaggagcca accacaaaga attgagagaa 660
atnaacaact gggccttngg aaagaaangc nggccaagct gcttgagtaa tagtcaganc 720
ctanggaaat gatntggtta atgaattcac cccaggncac acccngttga agagc 775

<210> 779
<211> 781
<212> DNA
<213> Homo sapiens

<400> 779

gcttttnann nccctncttt cnaancctct tcaaatcctt ggntatcgtt ctntctgnng 60
gatcccatcg attcgaattc ggcacgagag acaaagaaaa aggtggcaat catagaagag 120
ttagtagtag gttatgaaac ctctctaaaa agctgccggt tatttaaccc caatgatgat 180
ggaaaggagg aaccaccaac cacattactt tgggtccnnt nctacttggc acaacattat 240
gacaaaattg gtcagccatc tattgctttg gagtacataa atactgctat tgaaagtaca 300
cctacattaa tagaactctt tctcgtgaaa gctaaaatct ataagcatgc tggaaatatt 360
aaagaagctg caaggtggat ggatgaggcc caggccttgg acacagcaga cagatttatc 420
aactccaaat gtgcaaaata catgctaaaa gccaacctga ttaaagaagc tgaagaaatg 480
tgctcaaagt ttacaaggga aggaacatca gcggtagaga atttgaatga aatgcagtgc 540
atgtggttcc aaacagaatg tgcccaggct tataaagcaa tgaataaatt tggtgaagca 600
cttaagaaat gtcatgagat tgagagacat tttataggaa atcactgatg accagtttga 660
ctttcataca tactggatga aggaagatta cccttagatc atatgtggac ttattnaaac 720
tatgaagatg tactttnaca gcatncattt tacttcaagg cagcaagaat tgcttttaga 780
c 781

<210> 780
<211> 783
<212> DNA
<213> Homo sapiens

<400> 780
gnntttnnan nnccngnttt ctaatnctnt tcnaatnctt tgnnancgtt ctntatgcan 60
gacccatcga ttcgggaatc tcctagaaaa gttgtgattt tcgagccata tccttctgtg 120
gtagatccta atgatcctca natgttggcc ttcaacccca ggaaaaagaa ctatgatcga 180
gtaatgaaag cactggatag cataacttct atcagcnaaa tgacacaagc accatatctg 240
gaaatcaaga agcaaatgga taaacaggac ccccttgctc atcccttact gcaatgggtt 300
atatcaagta atagatcaca tattgtgaaa ctgccagtta acaggcaatt gaagtttatg 360
catactccac atcagttcct tcttctcagc agtccaccag ccaaagaatc caattttaga 420
gctgctaaaa aactctttgg aagcaccttt gcatttcatg gctcacacat tgaaaactgg 480
cactccatcc tgaggaatgg tctggttgtt gcttctaata cacgattgca gctccatggt 540
gcaatgtatg gaagtggaat ctatcttagt ccaatgtcaa gcatatcatt tggtactcag 600
ggatgaacaa gaaacagaag gtgtcagcca aggacgagcc agcttcaagc agtaaaagca 660
gcaaatacat cacagtcacn ggaaaaaagg acagcaatcc caattcctgc caaagccgta 720
acttaaaatg catagncctt atgtgaaagg gatcaccttc atctggacct gcacaaacat 780
ggc 783

<210> 781
<211> 796
<212> DNA
<213> Homo sapiens

<400> 781
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gttcaattcg gacgagaccc ttatggcaga tccccacagt ctggggcaga agaggcgtcg 120
aggngccaga agtgncggca gcagcagccg cagcagccca aagagaggca agagaaagag 180
aaagcggccg gtggaggggt nnncggaaga gctggtcccc gtggttgagc tgggtccccg 240
tggttgaatt ggaagaggcc atagccccag gctcagaggc ccagggcgct tgggtctggt 300
ggggacgcgg gggttgcccc caatggtgca gctgcagcag tcaccactag ggggtgatgg 360
agaggaaggg ggccacccca gggccattaa caaccagtac tccttcgtgt gagccaaccc 420
cacccgctcc acccttttta aacccccag cccttgctcg tgagattggg cttgggtagg 480
gacagaagag gcccgaaatc cctcccccat gcttnctgac ccttgtttgg ccaaagggca 540

tctttgatgg tacaaagcag angcttcggg anaagcttcc gtcacaacac tncaaggtcc 600
cttcccaagg gcaaggggat ttnggcttca tgagctnctt tgaggggctt ttttttggtc 660
annccccacc ttnggggcca tttttcccaa ttaacttacc cccaacccca agncanggtt 720
nagggggnaa agggctttcn anttccatta aaggggattt gtttgttgnt gttttaaacc 780
aaaatgggga aancnn 796

<210> 782
<211> 886
<212> DNA
<213> Homo sapiens

<400> 782
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angaaaacct ntgggaaaag nccncannna ttttngngaa annggcnnga gcnnanantn 120
ggacacngtt ntaannnnan nagngnnngt tttnnganan agggnnnnna gnggnannna 180
ngngnnggag ggaannaagg nanagnannn ggnagnnaag gnnnnaaaga agnagnnang 240
gaganggnnn gnggnggggc atgangnggg nncagaggca cgaggagccc aagaccatca 300
cngangagna ngagcagggn accnacatnn acnnggacna cgagaagngg ggccagcgga 360
agaaggaagg nagnacctng agnaccgnta ccaggaggan cgggaccnac agngacanag 420
gnccnnnncn anacggannn nanaaacgng aagcaggann nnnanggacc aagggaaggg 480
nncngnncnn ggaaaganng ggagggaggn ncgaaggcaa aggggggann cgnnannncc 540
aggaagnang gaaggggggn cgggaggnna annganaaga ngaaccnngg gggnncaggg 600
gggcgagggn agcanaannn nnccnnagnc aanngaaggg gananaagag ngggaaaann 660
aannagaaag agggaaaana agnnaaggaa anaaaagang ngnnaannng gganaaaana 720
nggnganann gnngganaaa ngngnannan aaaanngagg aggncanngg gnaaanaana 780
nggggagggn nganananag ngaannagac aaggaanagn gaannagngn anagnanngn 840
gnannaaagg nannggggna anaagnanna nannnnnagn gaagan 886

<210> 783
<211> 805
<212> DNA
<213> Homo sapiens

<400> 783
cnaatncttg ctcttgncct ntttcnaatn cttggcnact cgctttctnt gcggatccct 60
cnnganncna tcgttcgaat tcggcacgag cacaaggaga agaaagttaa ttaacattga 120
aagatgagaa gacatcttgg aagacttgaa ttgggccttg gaagaagaac agccattcaa 180
atagatagaa ttgtggtagc aaaggcatac ngntcggaaa gtatagatct ccagggacag 240
tagtcatggg gttggggcac tgttggaatt taaggttgga aggatatatt ggagcccctt 300
gaatacggta acaaggcaca ccttgggcag tggagagtta tcagagtgtt tgaaaaggag 360
ggttattgag taaataaata gactggtact ttaggaattt taaaatgtgg atcattgtac 420
tactaataac tatntatttt atatttacta tctactaagt aatttacatg tattttcttg 480
tactgactgt aaaccttctg ggtgtgggtg ttttaagtgc cattttactg ataaagaaac 540
tgangcttaa atagntgaaa tanntcaccc tgttagtgag tggcacaatg acaagtcann 600
atcttanggt tgccnanntc caaaanncat ttaaanttnn agnatnattg annnttttnc 660
cttatggcnt nnnaaatttg gggagccatt attgaaatcc nttacnacnt angaattgnc 720
caaaaaaaat actttttggg gaaaactgga tttattaatt atccaaaata atttnantgg 780
cttgnttggc ttntttccac tntnc 805

<210> 784
<211> 776

<212> DNA
<213> Homo sapiens

<400> 784
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atcgattcga attcggcacg aggttatatt aaattattct ttgntnttct ttgtctttta 120
ataaagcctg caagttacta aattgnagtt ncataaattc tgtagtnaag tatcatcttg 180
gcagngtgcc aaaggtgaaa angntgcttn ctctaacaga gaaattctta gngactccag 240
tcgtanaaaa acgtctttac aacctgaata agatnganga attgngaaca taccatggcc 300
tattggatga atcatttgcc ggnggctana ncagactgta gggtttgtga tggatntatg 360
gagtatgtgg gtatagaaat catgaatntn ccatttgnnn ncagagattc aagcntanac 420
ttaatgggta gatcataaat gacagaatga attcaaaacc tagcacgtgc attgtaaatg 480
tgtgcccaga tatgtnttgg aaatggcagn tccttggggt catgtntcta ctggcaaaat 540
ttgctatagn gnnactattg nantgtaatt ataaaattna tcannattat ncaccgattn 600
gccaagtaaa ctgtactgtn cataggaatt ttgggaattg tgcanaaatt ggatcaattg 660
aanttnagaa cngatgtctg ggcttaaaaa tttatcnggg accacnnatt angaaactna 720
catntttcgg ngctgaggtt cattgnccaa ggccangaag gtntttnccg aaaanc 776

<210> 785
<211> 778
<212> DNA
<213> Homo sapiens

<400> 785
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tcctctttnt gnaggatccc atcgattcgt gaaagaggag atcggtgacc tgggctcctt 120
atgtgcctga atgagtttga gtttcctgtt aactccaaat caacagtatt ttcaacaaga 180
aatgtgcaat tgaaatcaag tgctgtttaa gtgcagctag gantccacag gaagacactt 240
gcagtgaaca gagttatgga gcagcaaaaa cacagatcta tttggaaaaa gagaaaacat 300
atgcgttgta ttttgcttca attataaaat accatcctct caaaggtggt tctaaattac 360
aaaggacttt gatttctagg tagattctgg gtagagactt cctttcatat tgaggcatta 420
atgacacctt ttaacctggg aagcaatatg actggagttg tactttgaga agattaatca 480
ggtttggttg cagaatgaaa gagaagatga agtcaagaga ttggtttaga ggctctagca 540
gaagcttagt catatttcaa aatgatcaaa tatcaagaaa aattctgagc tgcataactt 600
gtataaagta attttcagtg attttttttca tggttatgat aaaagaactg gattagcaga 660
aacttttacc ctgaatcaag atttaatttt tcttttgagct catcttaagg atatcggaac 720
atagggagca aacgatggtg tggctgcctc antgcttgaa ttttaacngt tttgaaan 778

<210> 786
<211> 805
<212> DNA
<213> Homo sapiens

<400> 786
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naaatccttg gcnactcgtn ctntctgcag gatcccatcg attcgaattc ggacgaggag 120
aggatcactt gagcttagga gttcaaatcc agcctgagcc aacataacaa gactttgtct 180
ctaaacaaaa cagttattgt ttaaagaatc tgaaatcttc atctttaatt caggtagccg 240
tgaatcgagc ccaagtttgt ttgatatcca gttccaagtc tggagagagg catctttatc 300
ttattaaagt atcgagagac aaaatatcag acagcaatga ccaagagtca gcaaattgtg 360
atgcaaaagg gctatcaaag ggaggctttt tacagagaac taaggaagag aaggaggttg 420

ttaaagagac ttgagatcag aaaaagatca agaacaactt gaatctcaaa gtatgaattt 480
gaagtatttt gctgagcaaa catttgaatg cctgtatgta ccgtaatcct ctatcactgg 540
ggtccccaac cccggtacca gcccgtggcc tgctagggac tgggccgcac agcaggaggt 600
gagcagtggg tgggcaagcg accattccca cctgagcttc ccctcctgtc agatcagcag 660
cagcgttaga ttctcatagg agtgcaaaac cctattgtaa actgcccatg ccaagggatc 720
tangttgcaa cgcttcctta tgagaanttg aatgcctgan ngaactgtca ctgncttcca 780
tnaaccccca gatgggtact ngttc 805

<210> 787
<211> 775
<212> DNA
<213> Homo sapiens

<400> 787
ccttggnnag nngccccctt naaanccttt gaaaaccctt ggcaaangcc ctnncngnnn 60
gatcccatcg attcgaattc ggacgaggag aggatcactt gagcttagga gttcaaatcc 120
agcctgagcc aacataacaa gactttgtct ctaaacaaaa cagttattgt ttaaagaatc 180
tgaaatcttc atctttaatt caggtagcac cgactcgagc ccaagtttgt ttgatatcca 240
gttccaagtc tggagagagg catctntatc ttattaaagt atcgagagac aaaatatcag 300
acagcaatga ccaagagtca gcaaattgtg atgcaaaagg gctatcaaag ggaggctttt 360
tacagagaac taaggaagag aaggaggttg ttaaagagac ttgagatcag aaaaagatca 420
agaacaactt gaatctcaaa gtatgaattt gaagtatttt gctgagcaaa catttgaatg 480
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cacctgagct tnccccctcct gtcagatcag cancagcgtt agattctcat aggagtgcaa 660
ccctattgta aactgccatg cnagggatct aggttgcacg ctccttatga ggaattgaat 720
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<210> 788
<211> 774
<212> DNA
<213> Homo sapiens

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tagtcattat ggcagcagct tctgatgttt ttgtttggta ggttttctga tttcaatata 180
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tacatgcaca gttcattgcc acctttctta ggcctatgca tagttaataa ggttataatc 300
tactcaacat ggaaaatgga gcctatttgc aaacacacaa gtaattaaag taccaattct 360
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gagatgaaag ttaaaatggt tgatcacaga tcagtagcaa aatacaaatt gacaattcaa 480
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tctggcagta gtttggtgaa ttcctttcat tgnaatgata ccatgattac aggatcaaaa 660
atgcttaact tacttgccat tctgctcaca tcatcacagg ttgttntttt tttaaagcac 720
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<210> 789
<211> 773
<212> DNA

<213> Homo sapiens

<400> 789

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aactnntggt gcaactatgn ngnttggaag atgctgcnta tgtttattga ggattgcann 180
anananatcc tgaatnctcg ccntttncaa aggcttggat aaagcactca agccagctac 240
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gngccnanaa ngctgncgat gaactttgna tctggnnaga agtntaaaga atggcaggat 360
nantnnctaa ngatgaattt cannacnggn nnnccaccan tcttnaatnc tttaagatca 420
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ctattgcttt gggagtaccn taaaatacng ccntngngag tncacctnca atgaatnnaa 660
nctctttntc anganagctn nngatccata ngacntgctg ganatnttta aggaancttc 720
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<210> 790
<211> 953
<212> DNA
<213> Homo sapiens

<400> 790

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atgcttngtg aagcctgann ccaaanctna aggnanggac ctggatcccc ttatatngaa 180
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aacctgaaaa tgcagctggt anaatntcaa tgggaagcat aaatncatgt aaaatataat 480
tnagntngaa tatnanngta aaaatgcact tttnngcggt gtgacngatc ctgggnnccc 540
annatctgnn attnaagngn tttacnaang gaanggaaag gacctttncc taaactacct 600
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<210> 791
<211> 798
<212> DNA
<213> Homo sapiens

<400> 791

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tgttttaaat tctaggatag attttaacat cctttgcggt cccagtccaa ggtangctgg 240
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gtagcctact gagttaatat ttaagttgtc aatagataag tgtccctgtt ttgtggcata 360
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aatctgtgta tctaatacta acccaatctg tttggatgtg gattttaaaa aaatgtttgc 480
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tnncaaaagg tgttngatnc naattacttt aaaataaaac ctgtaattgn ataatgncat 660
aatgntgntc catgcctnan tccccttcta gnnntanaaa cntnantaan aantatatca 720
atnntcgatn aaatnntann actataaaaa ctncggccct cttananact tnatncttga 780
agttctcant ataaccnc 798

<210> 792
<211> 788
<212> DNA
<213> Homo sapiens

<400> 792
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caattggcan ttcattttta atggttttna aggttcaagg ggggaaggtt tttgggaagg 720
ttttttaaa attnncgggn ccnnnggngc ccaatgcatt tggggccccg ggnccccaaa 780
nttttttt 788

<210> 793
<211> 806
<212> DNA
<213> Homo sapiens

<400> 793
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tataaagtcc ttcagccctt tgggactcta aattggnggg ggattaaaaa gaatttaaaa 240
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<210> 794
<211> 815
<212> DNA
<213> Homo sapiens

<400> 794
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<210> 795
<211> 1050
<212> DNA
<213> Homo sapiens

<400> 795
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<210> 796
<211> 884
<212> DNA
<213> Homo sapiens

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caggcacact gcatcggctt cccggacctg gggctgcctg tggtcctgca gntgaagtcg 180
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<210> 797
<211> 773
<212> DNA
<213> Homo sapiens

<400> 797
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gngtgtcaag tccttatttt tangtgccta attggacatt ttaaaaggtt aaattattng 720
gttggcatat taatntcaaa aaatctatta attnatttta atgcctggta ccg 773

<210> 798
<211> 812
<212> DNA
<213> Homo sapiens

<400> 798
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gaccaaccaa aggattccca cccangaaaa cccnaanggg cccnaaactt gttnncttgn 720
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accagntttt tggggcttta aattggcctt gg 812

<210> 799
<211> 758
<212> DNA
<213> Homo sapiens

<400> 799
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tncaaacact ttgcttcttn cagnctnaac cttganagnc ggcctacaag ntgctgaatg 720
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<210> 800
<211> 770
<212> DNA
<213> Homo sapiens

<400> 800
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<210> 801
<211> 573
<212> DNA
<213> Homo sapiens

<400> 801
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<210> 802
<211> 1390
<212> DNA
<213> Homo sapiens

<400> 802
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<210> 803
<211> 947
<212> DNA
<213> Homo sapiens

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<210> 804
<211> 532
<212> DNA
<213> Homo sapiens

<400> 804
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<210> 805
<211> 552
<212> DNA
<213> Homo sapiens

<400> 805
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<210> 806
<211> 1646
<212> DNA

<213> Homo sapiens

<400> 806

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<210> 807
<211> 1029
<212> DNA
<213> Homo sapiens

<400> 807

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<210> 808
<211> 836
<212> DNA
<213> Homo sapiens

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<210> 809
<211> 1844
<212> DNA
<213> Homo sapiens

<400> 809
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<210> 810
<211> 489
<212> DNA
<213> Homo sapiens

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aatgtgtgg 489

<210> 811
<211> 471
<212> DNA
<213> Homo sapiens

<400> 811
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<210> 812
<211> 579
<212> DNA
<213> Homo sapiens

<400> 812

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<210> 813
<211> 562
<212> DNA
<213> Homo sapiens

<400> 813
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tgtccgtctc cccacacggg gc 562

<210> 814
<211> 594
<212> DNA
<213> Homo sapiens

<400> 814
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<210> 815
<211> 812
<212> DNA
<213> Homo sapiens

<400> 815

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<210> 816
<211> 999
<212> DNA
<213> Homo sapiens

<400> 816
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<210> 817
<211> 653
<212> DNA
<213> Homo sapiens

<400> 817
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cttgccattc taaggggcct ttcttcatcc attcactcat gattgccacc tggctaaatc 600
agttaaaaaa ctcctcgcaa ctctgggtac tcagcaacca tgctttgagg aag 653

<210> 818
<211> 1225
<212> DNA
<213> Homo sapiens

<400> 818
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<211> 1024
<212> DNA
<213> Homo sapiens

<400> 819
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<210> 820
<211> 631
<212> DNA
<213> Homo sapiens

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cccatccttt atactcattc ttctcactgg ctgtcactcg gacctctttg taaatgtaat 540
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<211> 635
<212> DNA
<213> Homo sapiens

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tgccgcagct ggcgcagccc acgctcatga tcgacttcct cacccgcgcc tssgacctcg 180
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agggccttnc agcggcatta ccaacttgag gtttt 635

<210> 822
<211> 752
<212> DNA
<213> Homo sapiens

<400> 822
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actgttcgat ccacagttta cccacaatga tattatgcac acagcaggtg ggatttgtcc 180
atgtatatgc ctcattgtgt tcaaggagct ccaaggtgat ggttcctttg ggttctgctt 240
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<210> 823
<211> 899
<212> DNA
<213> Homo sapiens

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tcatgatcac atgaggatcg tcacagctcc gtgtccatta gcacattacc ctccttgtcc 180
ttaactctta tccgaccgga tctgtacttc gtttcttgat gaccgtttgc atatacggtt 240
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<210> 824
<211> 1980
<212> DNA
<213> Homo sapiens

<400> 824
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tcgttattat aaatgttagt tctagctcta tttacttcta atcttaaatc agaataaatt 1920
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<210> 825
<211> 333
<212> DNA
<213> Homo sapiens

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gttaggaaat ggcatctcat tgttttcatc ttaatttgcg tcagcctgat tactcattga 180
aacttgtgag gttgagaaac ttttcttaag cttattggcc attcaagttt cctcctttat 240
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tgacttgtag gaactctaca tcttatcaat att 333

<210> 826
<211> 658
<212> DNA
<213> Homo sapiens

<400> 826
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caatttgtac aactcagtgt tatggcattc ggcagcaata gtgtttgttc cttattctct 180
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taggkcccaa atccagtttt taaatttata ctccacnaaa aangaaaata catacataaa 480

awtttaaacc mcngttytgg gcccattwaa acaccmaaaa agaccccccn aaaagttaag 540
anttccagct tanttctgga ngggtgggnc aaaatarraw kktwtawwma wwwymytwwt 600
ccnkmattca gacaaactaa aatcttaaga ggaaacccag accaaaatat cactcatg 658

<210> 827
<211> 453
<212> DNA
<213> Homo sapiens

<400> 827
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cataaaatta accatcacaa ccatgttcta ggcactgttc ctcactgcct gagaagacac 180
cgttatgttt attagggttt ttgagtttta tccacagctt ttggttatct gcaaccatgt 240
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<210> 828
<211> 657
<212> DNA
<213> Homo sapiens

<400> 828
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tgttggccca gaaggctgag gaaaaggaga accattgtcc cacaatgctc cggccccttt 120
cacatcgcac agtcacaggg gcaaagcccc tgaaaaaggc tgtggtgatg cccctacagc 180
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tcgccgccgg ccagcgctgt ggcgcctcct gaccgtcgtc tcctcactcc gccttttcaa 600
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<210> 829
<211> 775
<212> DNA
<213> Homo sapiens

<400> 829
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gtaagacacc aaacacacac ctcatttcct gaactgtgac ttccaagctg acatttttct 180
gagaagcata attattggtt tcattgacaa ttaagttgaa tgtttcatca tcaaaaaata 240
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<210> 830
<211> 413
<212> DNA
<213> Homo sapiens

<400> 830
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cttggcgcak agcsmcasgk gcagtgtggc ntgctgcccc ccaggaggcc tgaggctggg 240
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<210> 831
<211> 876
<212> DNA
<213> Homo sapiens

<400> 831
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<210> 832
<211> 768
<212> DNA
<213> Homo sapiens

<400> 832
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aatatacata tttatttttcy ttaaagcagc tatatcccaa cccatgactt tgggrgatat 720
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<210> 833
<211> 1604
<212> DNA
<213> Homo sapiens

<400> 833
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(57) Abstract

This invention relates to novel human polynucleotides and variants thereof, their encoded polypeptides and variants thereof, to genes corresponding to these polynucleotides and to proteins expressed by the genes. The invention also relates to diagnostic and therapeutic agents employing such novel human polynucleotides, their corresponding genes or gene products, e.g., these genes and proteins, including probes, antisense constructs, and antibodies.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 98/27610

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 C12N15/12 C07K14/47 C07K16/18 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 C12N C07K C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CARMECI, C. ET AL.: "Identification of a gene (GPR30) with homolgy to the G-protein-coupled receptor superfamily associated with estrogen receptor expression in breast cancer." GENOMICS, vol. 45, no. 3, 1 November 1997 (1997-11-01), pages 607-17, XP002099963 abstract page 608, left-hand column, paragraph 3 --- -/--	1-7

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Date of the actual completion of the international search	Date of mailing of the international search report
15 April 1999	11. 11. 99

Name and mailing address of the ISA	Authorized officer
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Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	YEATMAN, T.J. ET AL.: "Identification of genetic alterations associated with the process of human experimental colon cancer liver metastasis in the nude mouse." CLINICAL AND EXPERIMENTAL METASTASIS, vol. 14, no. 3, May 1996 (1996-05), pages 246-252, XP002099961 abstract	1-7
X	NUCLEIC ACID RESEARCH, vol. 23, no. 19, 1995, pages 4007-8, XP002099962 cited in the application the whole document	1-7
A	RADINSKY, R. ET AL.: "Level and function of epidermal growth factor receptor predict the metastatic potential of human colon carcinoma cells." CLINICAL CANCER RESEARCH, vol. 1, January 1995 (1995-01), pages 19-31, XP002099964 the whole document	
A	BALDI, A. ET AL.: "Differential expression of the retinoblastoma gene family members pRb/p105, p107, and pRb2/p130 in lung cancer." CLINICAL CANCER RESEARCH, vol. 2, July 1996 (1996-07), pages 1239-45, XP002099965 the whole document	

INTERNATIONAL SEARCH REPORT

rnational application No.
PCT/US 98/ 27610

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION SHEET

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

SEE ADDITIONAL SHEET

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-7

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: Invention 1: claims 1-7

A library of polynucleotides comprising the sequence information of at least one of the sequences 1-844.

2. Claims: Invention 2: claims 8,13-19,21 all partially

The isolated nucleic acid with seq.ID 1, sequences with at least 90% sequence identitiy therewith and degenerate variants thereof, host comprising said nucleic acid, peptide encoded by said nucleic acid, antibody against said protein, vector comprising said nucleic acid, and a method for detecting the differential expression of said nucleic acid.

3. Claims: Inventions 3-845: claims 8-22, all partially, as far as applicable

As invention 2, but limited respectively to the seq.ID's 2-844

For the sake of conciseness, the second subject matter is explicitly defined, the subject matters of inventions 3-845 are defined by analogy thereto.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

In view of the large number of libraries, which are defined by the general definition in the independent claim 1, the search had to be restricted for economic reasons. The search was limited to the libraries for which data was given in the description, or libraries derived from cell lines mentioned in table 4 of the description, and to the general idea underlying the application (see Guidelines, Part B, Chapter III, paragraph 3.6).